"BUILDING FOR PROFIT" NUMBER

FEBRUARY, 1933

COTTON

Serving the

TEXTILE INDUSTRIES

FEB 9 1933

IMPROVED AUTOMATIC SPOOLER

Runs 4 COUNTS *of Yarn*

One, two, three, or four different counts of the same or different kinds of yarn may be spooled simultaneously on a special Four-Count Double-End Improved Automatic Spooler with no more difficulty than spooling one count on the standard machine. By the use of this type of spooler a large variety of counts and colors can be handled.

Empty bobbins are delivered to four stations, two at each end of the machine. Half of the spindles on each side deliver to opposite ends, keeping the bobbins for each count separate. One traveler and knotter serves all spindles.

Another example of FLEXIBILITY of Barber-Colman Machines

BARBER-COLMAN COMPANY

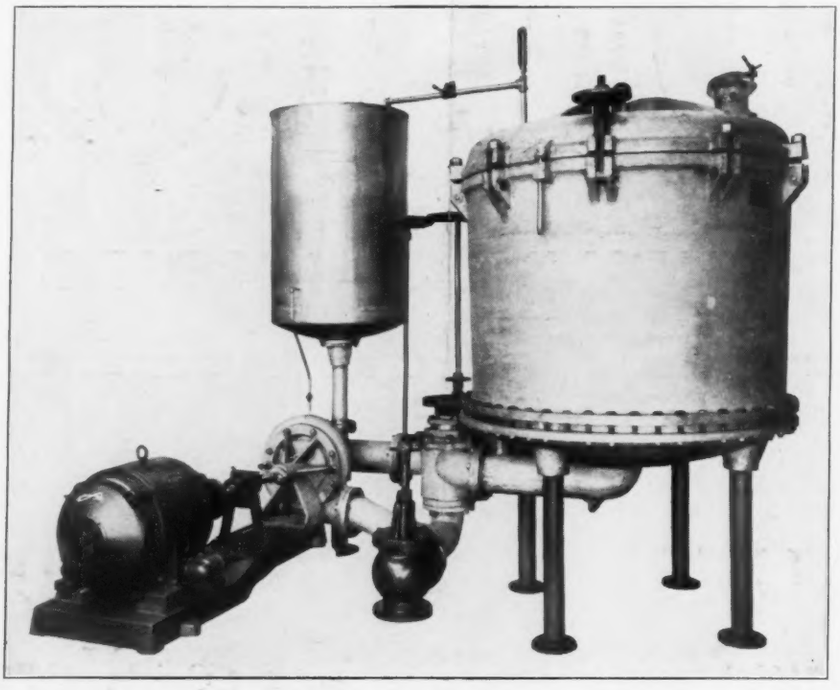
General Offices and Plant ROCKFORD, ILLINOIS

GREENVILLE, S. C. FRAMINGHAM, MASS.

Table of Contents, Page 21. **KNITTING SECTION, PAGE 93** Advertisers' Index, Page 128.

IF YOU REALLY WANT SUCH A MACHINE---

Here's the Last Word in RIGID TUBE Package Dyeing Equipment



We still retain the spring tube machine in the Franklin Process line. We still think it is the best machine on the market from the standpoint of quality and general adaptability.

However, if you do not spin your yarn, you may want to increase your sources of supply for this item. A rigid tube machine may do this for you, since more spinners offer natural yarn on perforated rigid tubes than on Franklin Process spring tubes.

If you really want a rigid tube machine here it is. The exterior of this machine is just the same as the Franklin Process spring tube machine. The interior is also the same except that fluted rod holders are substituted for perforated spindle holders. The rigid tubes in this case form a circulating pipe.

Present owners of Franklin Process spring tube machines can have these machines converted into rigid tube machines, if they so desire at a relatively small cost.

This machine offers every advantage that other rigid tube machines offer and more besides, as follows:—

Minimum loading and unloading time (approximately 75% saving as compared with European drum carrier type of machine).

Shortest dye bath (maximum ratio of 8 lbs., or 1 gallon, of liquor to 1 lb. of yarn).

Minimum floor space (no drum carrier to create dead space).

Low cost of upkeep (no delicate spindle holders to be broken by accidental blows or by vibration).

Low labor cost (estimated at ½c per lb. less than for European drum carrier type of machine).

One unit system (it is estimated, on the basis of equivalent expenditure, that this system will produce at least one more batch per day than the three unit system.)

PURCHASE ON PERFORMANCE

FRANKLIN PROCESS COMPANY

Manufacturers of Package Yarn Dyeing Machines, Jackspool Dyeing Machines, Worsted Top Dyeing Machines, Wool and Cotton Raw Stock Dyeing Machines and Silk Soaking Machines. Also Custom Yarn Dyers.

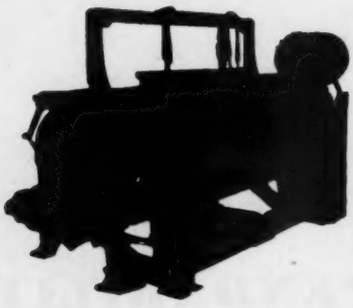
Providence Philadelphia Greenville, S. C. Chattanooga, Tenn.

NEW YORK OFFICE, 40 WORTH STREET

FRANKLIN PROCESS

. . PACKAGE DYEING MACHINES . .

COTTON is published monthly by W. R. C. Smith Publishing Co., Dalton and Atlanta, Ga. Subscription Rates, United States and Possessions, $1.00 for one year; $2.00 for three years; Canada, $1.50 per year; Foreign countries, $2.00 per year. Entered as second-class matter at the postoffice, Dalton, Ga., under the Act of March 3, 1879.



X Model Loom

Weaver

Loomfixer

Battery Hands

Profits

HIGH SPEED MEANS 20% MORE CLOTH

100 OF THESE

With

1 OF THESE

and

1 OF THESE

and

1½ OF THESE

Produce

MORE OF THESE

Than You Can Get With

ANY OTHER LOOM

DRAPER CORPORATION

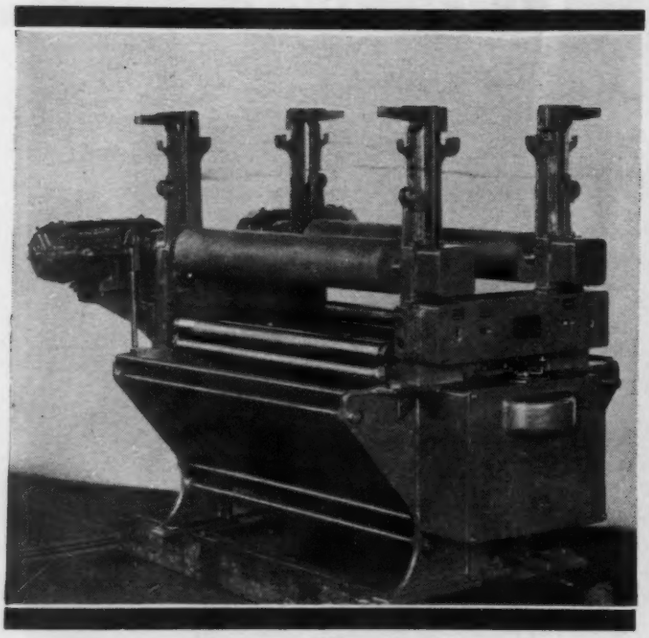
Hopedale Massachusetts

Southern Offices Atlanta Ga and Spartanburg S C

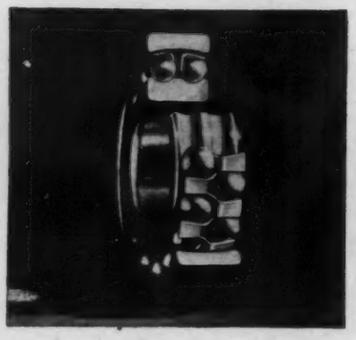
THE SKF GALLERY OF DISTINGUISHED PERFORMANCE USERS:

RICE, BARTON & FALES, Incorporated

UTMOST CONFIDENCE WITH SKF DEPENDABILITY



NOT ONLY are the two large beam rolls of the new Rice, Barton & Fales Improved Dye Jigg carried in SKF Ball Bearings but the motors and reduction units are also SKF equipped . . . to insure the utmost dependability of the machine at all times. Keeping equipment operating at its highest efficiency makes SKF Performance Take Preference Over Price.



Where improved quality of finished product... elimination of friction's drag, and savings in operation are stressed... SKF Ball Bearings have a definite responsibility... and they meet it continuously...without a bit of trouble. Throughout a long life they show no wear, need no adjustments and comparatively little maintenance. Housings are designed to exclude moisture from the bearings and prevent lubricant leakage that might damage goods in process.

SKF INDUSTRIES, Inc.
40 East 34th Street, New York, N. Y.

2992

WHERE PERFORMANCE TAKES PREFERENCE OVER PRICE

● *You may buy a bearing as a bargain but try and get a bargain out of using it, for nothing is apt to cost so much as a bearing that cost so little.*

SKF BALL AND ROLLER BEARINGS

Don't shut your eyes to the present necessity . .

MODERNIZATION

THESE are days when pencils are sharpened, costs are figured down to the bone—short cuts are being taken—but at the same time you cannot afford to sacrifice quality.

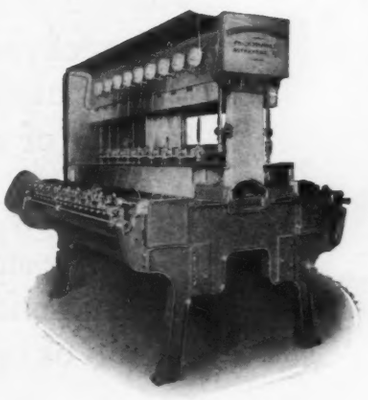
We in the Textile Industry know that this is a general condition to which no concern is immune—large or small.

How to meet this condition successfully has but one answer

MODERNIZATION

Today many plants that are making both ends meet and showing a profit have managements which had the courage and foresight to scrap obsolete machines in favor of modern machines which produce better finishes, run at higher speeds, and reduce the man power required.

Among these modern machines let us mention the Butterworth ULTRA Package and Beam Dyeing Machine; the new Butterworth Rayon Pot Spinning Machine which has traverse action, five times as fast as any heretofore on the market.

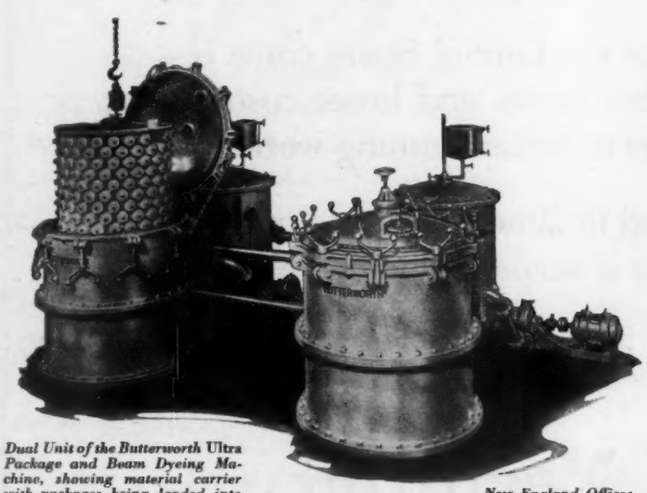


BUTTERWORTH *Rayon Pot Spinning Machine. Has traverse action five times as fast as present machines.*

Then there is the Butterworth Sanforizer. One of our customers has now placed an order for a fourth Sanforizer.

Concerns who purchased and installed these new machines were alive to conditions—they have plants to keep busy and they have to show black—not red.

The way that you too can do this is through modernization—by replacing profit-stealing machines with others which have been designed to meet today's conditions. These are machines made by Butterworth.



Dual Unit of the Butterworth Ultra *Package and Beam Dyeing Machine, showing material carrier with packages being loaded into the kier.*

H. W. BUTTERWORTH & SONS CO.

Established 1820

PHILADELPHIA, PA.

PLANTS *at* PHILADELPHIA *and* BETHAYRES, PA.

New England Office: TURKS HEAD BUILDING, Providence, R. I.

Southern Office: JOHNSTON BUILDING, Charlotte, N. C.

In Canada: W. J. WESTAWAY CO., Hamilton, Ontario

BUTTERWORTH *Finishing* MACHINERY

A COMPLETE LINE OF RAYON AND FINISHING MACHINERY FOR THE TEXTILE INDUSTRY

There Is No Better Picking Than

Aldrich Synchronized Single-Process Picking

More than 300 installations are in use on different makes of picking machinery, and they fully prove our claim that this is the simplest, least expensive, and best method of changing pickers to the single-process system.

From the standpoint of first cost, and last cost; quality of work, and quantity of production, there is no better system of operating single-process pickers.

More Than 600,000 Bales Of Cotton A Year Are Being Made Into Laps On Aldrich Synchronized Single Process Pickers.

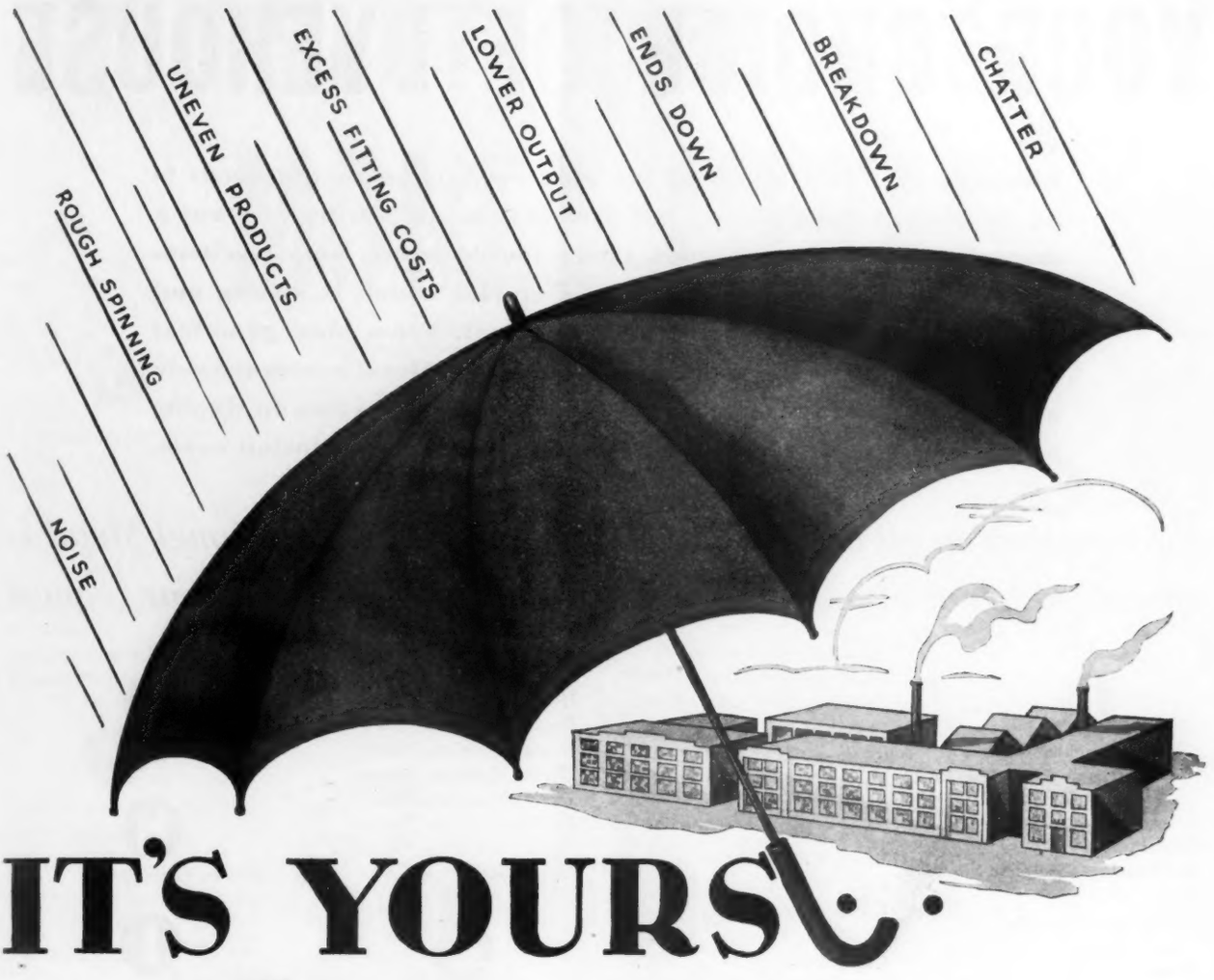
From Cotton Mills all over the United States come reports of evener and cleaner yarns, and lower costs in spinning and weaving, due to better running work.

This system can be applied to almost any kind of picking machines, and the cost is surprisingly low.

Made and installed by

AldricH MachinE

Greenwood **WorkS** S. Carolina



IT'S YOURS

if you want it

Protection — a regular umbrella over your machinery — a guarantee of satisfactory operation, even quality of product, low maintenance cost: — that's what the Whitin Guarantee can mean to you.

You can use it — for Whitin will assume responsibility for Whitin equipment as long as it is 100% Whitin — as long as Whitin repair parts, Whitin Spindles, Rings, Half Laps and the like are used.

Or you can throw it away — by relying on miscellaneous makeshift repair and replacement parts. Such parts are too frequently made from unsuitable materials and always lack the accuracy and smooth operation which is obtainable only when the parts are produced with the aid of the original jigs and fixtures.

Let us hold the umbrella over your Whitin Equipment. We will, so long as you use genuine Whitin repair or replacement parts when such are needed.

WHITIN MACHINE WORKS

ESTABLISHED 1831

Fales & Jenks Division *Woonsocket Machine & Press Division*

WHITINSVILLE, MASSACHUSETTS, U. S. A.

Charlotte, N. C. Greenville, S. C. Atlanta, Ga.

YOUR CHOICE OF DYEHOUSE

Choosing the *right* material for modern dyehouse equipment is no longer the complicated job it used to be. When users want a material which is rust-proof, corrosion-resisting, easy-to-clean, smooth and safe for fabrics . . . a material which is strong and durable . . . they now specify Monel Metal. From long, practical experience, these men know that Monel Metal's remarkable properties insure maximum efficiency and protection in dyeing processes with lowest operating, upkeep and depreciation costs.

Information on all of the following standard uses of Monel Metal is contained in our illustrated catalog which will be sent at your request

A

Aprons, Conveying

B

Baffle Plates
Ball Bearings, Complete
Balls
Baths, Water & Steam, Laboratory
Beakers
Beams
Becks, Dye
Bleaching Machines
Boards, Bobbin
Bobbins, Perforated
Bobbins, Steaming & Dyeing
Bolts
Bottoms, False
Bowls, Sink
Boxes, Color
Boxes, Moistening
Buckets
Bulbs, Thermometer

C

Cages, Raw Stock
Cans, Batch Transfer
Cans, Drying
Carbonizing Machines
Castings
Chains, Kier
Chutes
Clips, Tenter
Cloth, Wire and Filter
Coils, Heating
Cones & Covers, Hat
Conveying Systems
Cord, Sash

D

Degumming Tanks
Dippers
Dryers, Hosiery
Ducts, Ventilating
Dyeing Machines, Beam
Dyeing Machines, Circulating Liquor
Dyeing Machines, Cop
Dyeing Machines, Hat
Dyeing Machines, Package
Dyeing Machines, Paddle
Dyeing Machines, Piece Goods
Dyeing Machines, Pressure
Dyeing Machines, Raw Stock
Dyeing Machines, Reel Type
Dyeing Machines, Rotary
Dyeing Machines, Sample
Dyeing Machines, Skein
Dyeing Machines, Vacuum
Dyeing Machines, Vat Color
Dyeing Machines, Warp

E

Emulsion Troughs
Evaporators, Mercerizing Liquor
Expanders, Cloth
Extractors, Centrifugal
Extractors, Vacuum

F

Fans, Ventilating
Filters
Fittings, Pipe
Floats
Fulling Mills
Funnels

G

Guiders, Cloth

H

Hoods, Ventilating

I

Impregnators, Silk

J

J-Boxes
Jiggers
Joints, Swing

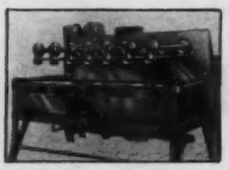
K

Kettles, Size
Kettles, Steam Jacketed
Kiers, Continuous
Kiers, Peroxide Bleaching

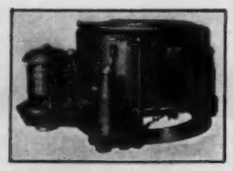
These and over a hundred other Monel Metal items are illustrated in the catalog offered

• DYEING MACHINES •

New type of oval reel construction, using half oval Monel Metal moulding. Built by Hinnekens Machine Company, Inc., Paterson, N. J.

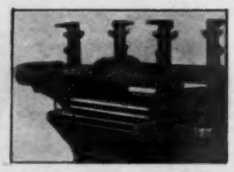


Smith-Drum new type of all Monel Metal skein dyeing machine. Manufactured by Smith, Drum & Company, Philadelphia, Pa.



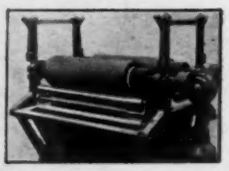
EXTRACTOR

American 48" O. T. Extractor manufactured by The American Laundry Machinery Company, Cincinnati, Ohio. Monel Metal side sheets and curbs of the baskets are standard construction.



• JIGGERS •

Improved type of dye jigg with constant speed and constant tension. Equipped with Monel Metal tank lining, immersion rolls and castings. M'f'd by Rice, Barton & Fales, Inc., Worcester, Mass.



New type of dye jigg with welded self-supporting Monel Metal vat and Monel Metal immersion rolls. Manufactured by Van Vlaanderen Machine Company, Paterson, N. J.

EQUIPMENT MADE EASY BY MONEL METAL

L

Laboratory Sinks
Lacing, Belt
Linings

M

Markers, Traffic
Measures
Mills, Colloid
Mixers, Portable

N

Nails
Nuts

O

Outlets, Tank

P

Padders
Pails
Pails, Acid
Pails, Seamless
(Heavy-duty, factory)
Pans, Round Deep Roll Rim
Perforated Metal
Pin Rails
Pins, Cotter
Pins, Safety
Pins, Textile (all types)
Pipe
Plate
Poteyes
Pumps

R

Reels
Rings, Concentric for Laboratories
Rivets
Rods
Rods, Pump
Rolls
Rope, Wire

S

Scoops
Screw Machine Work
Screws
Shafting
Sheet Metal Work
Singeing Machines
Sinks
Sizing Machines
Spindles, Perforated
Spinning
Springs
Stampings
Staples
Sticks, Dye

T

Table Tops
Tables, Topping
Tacks
Tanks, Lined
Tanks, Self-Supporting
Tanks, Wood
(Monel Metal Tie Rods)
Trucks
Tubing and Pipe
(¼" dia. & up)
Tubing and Pipe
(smaller than ¼" dia.)
Tubs, Soaking

U

Utensils

V

Valves
Ventilating Equipment

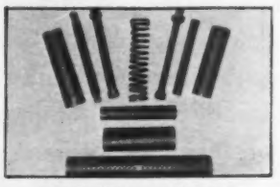
W

Washers and Dye Kettles, Combination
Washers, Plate, Punched, O.G. and Lock
Washing Machines
Wool Scouring Machines

THE INTERNATIONAL NICKEL COMPANY, INC.
67 Wall Street, New York, N. Y.

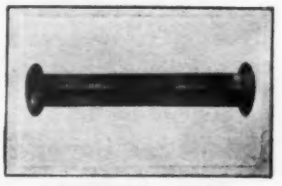
MONEL METAL

Monel Metal is a registered trade-mark applied to an alloy containing approximately two-thirds Nickel and one-third copper. Monel Metal is mined, smelted, refined, rolled and marketed solely by International Nickel.



DYEING TUBES

Perforated Monel Metal tubes and spring as used in package dyeing. Manufactured by Larson Tool and Stamping Co., Attleboro, Mass.



DYEING REEL

Break-proof Monel Metal reel for compartment type of skein dyeing machine. Manufactured by the A. B. C. Welding Company, Philadelphia, Pa.

GET YOUR COPY OF THIS CATALOG

Every dyehouse executive should have a copy of the "Illustrated Buyers' Guide and Catalog." This useful guide not only tells you what dyehouse equipment is available in Monel Metal, but also *where* to get it. In ordering catalog, please use coupon and indicate number of copies you need.

Monel Metal

C O U P O N

THE INTERNATIONAL NICKEL COMPANY, INC. C-2-33
67 Wall Street, New York, N. Y.

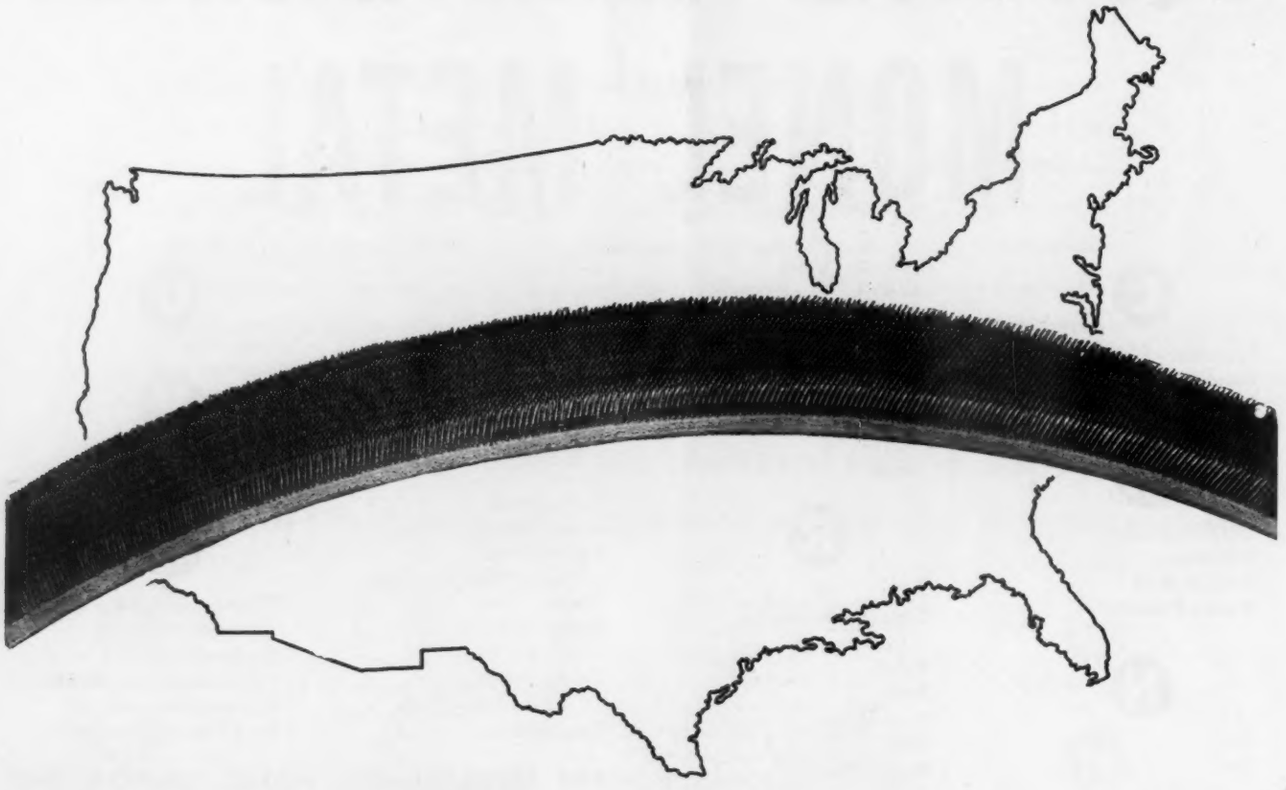
Please send.....copies of the "Illustrated Buyers' Guide and Catalog" to:

Company name.....

Attention of.....

Street.....*City*.....*State*.....

Clothing A Nation's Cards



HOWARD BROTHERS have located plants and warehouses at strategic points throughout the country's textile centers in order to give you immediate shipment. You can get the quickest possible service whether your requirements are TUFFER Card Clothing; Cylinder, Doffer, Stripper, Burnisher, or Emery Fillets; Napper Clothing; Wire Heddles; Hand Stripping Cards; or Strickles.

When your Top Flats and Lickerins are in need of repairs, Howard Brothers maintain a supply of extra sets for your use while this work is being done.

Our representatives are thoroughly competent to talk over card clothing matters and are at your service at all times.

HOWARD BROS. MFG. CO., WORCESTER, MASS.

Southern Plant
244 FORSYTH ST., ATLANTA, GA.

Branch Offices:
PHILADELPHIA — DALLAS — WASHINGTON

TRADE MARK
TUFFER
REG. U.S. PAT. OFF.

CARD CLOTHING

"Modernize for Profit"

with

Automatic-lubricated Twister Rings

EVERY mill man realizes that if his twister rings are perfectly lubricated, he gains tremendously important operating advantages.

What is "perfect lubrication?"

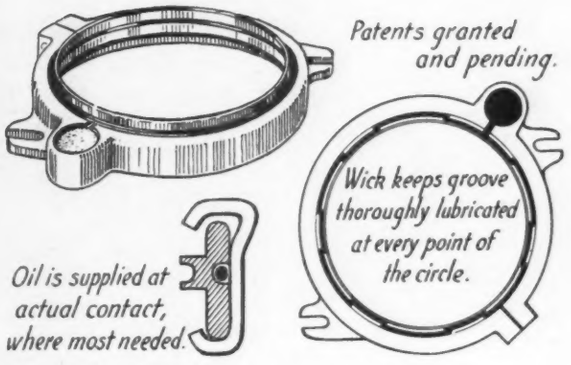
Perfect lubrication of twister rings must be Continuous: Oil should be present all around the ring wherever the traveler touches. It must be Adequate: the quantity of the oil and its viscosity must be just right. It must be Clean: an excess of oil would cause dirty work and be a disadvantage.

The DIAMOND FINISH Eadie Automatic-lubricated Ring, through its exclusive patented design, offers ALL these features. Oil is supplied all around the ring. Because of our continuous wick, we can use an oil thick enough for adequate lubrication; we do not have to use a thin oil to get distribution as on one-spot lubrication. For this same reason, our rings are clean in operation. The oil is controlled by the wick.

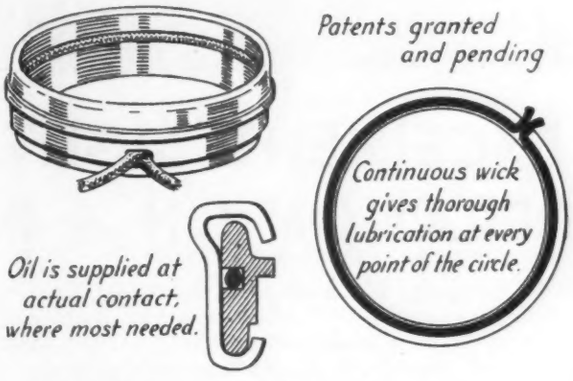
What advantages are gained?

The advantages of this perfected twister ring lubrication are immediately apparent to the mill superintendent. Production is increased because there is no stoppage for hand greasing, because of faster speeds made practical, because of less cleaning needed. The yarn is cleaner and more even. Traveler expense is reduced because heavier travelers with longer life can be used.

The slogan for 1933 is "Modernize for Profit." The DIAMOND FINISH Eadie Automatic-lubricated Twister Ring presents a definite opportunity for your mill to capitalize that slogan!


Patents granted and pending.
Wick keeps groove thoroughly lubricated at every point of the circle.
Oil is supplied at actual contact, where most needed.

Laced wick for small sizes


Patents granted and pending
Continuous wick gives thorough lubrication at every point of the circle.
Oil is supplied at actual contact, where most needed.

Continuous wick for larger sizes

Whitinsville (Mass.) SPINNING RING CO.

TWISTER RINGS — SPINNING RINGS

Operation: Winding of Pure Thread Silk.
Units used: 300-watt Glas-steel Units.
Spacing: 8′ x 9′.
Mounting Height: 15′ 0″ off floor.
Intensity: 25 foot candles everywhere.

Plant of The Katterman & Mitchell Company, Columbus, N. C.

• EXCELLENT LIGHTING PLACES NIGHT OPERATION ON A PAR WITH DAYLIGHT

• THREE years ago The Katterman & Mitchell Company located a new silk weaving plant at Stanley, N. C. In 1932 they secured two more plants in the South, one at Laurens, S. C. and one at Columbus, N. C.

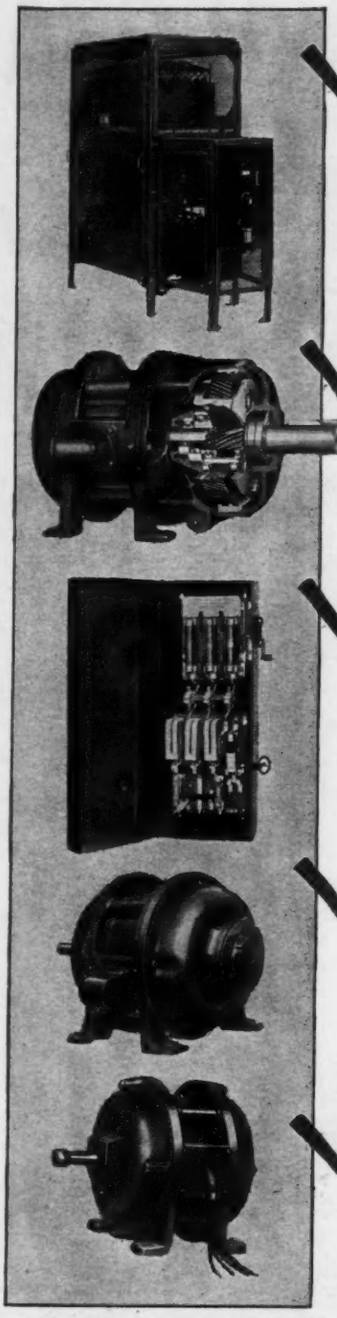
The privilege of laying out the lighting job at Columbus, a spooling and winding plant, came to us—a direct result of the satisfaction created by the lighting plans put into effect for them at their Stanley plant. Mr. George H. Hacker, superintendent of the Stanley plant and general superintendent of the two other plants, gave our lighting engineers carte blanche to lay out for them the kind of lighting job best suited for their operations. We gave them a modern and most efficient type of lighting—a lighting intensity of 25 foot candles *everywhere*. The result is that the plant *operates nightly at daylight par*.

Good lighting gives good operation and good management the utmost opportunity. Poor lighting handicaps everything and everybody. Poor lighting pays for good lighting but does not give it to you. Good lighting arms you with every advantage in efficiency, safety and high morale of employes; it permits quality and perfection of workmanship, accuracy, uniformity and volume in production.

As in this case, the services of General Electric lighting engineers are available to any manufacturer without cost. Would you like to know what is the best (most efficient) lighting for your plant? Write General Electric Company, Nela Park, Cleveland, O.

GENERAL ELECTRIC
MAZDA LAMPS

Check these electrical tools for money-making modernization



CAPACITORS—If you have a power-factor penalty clause in your power contract, it will pay you to check up on your power-factor. If it is low, you can improve it simply and easily by connecting a G-E capacitor to your lines. A textile mill in New York installed a 480-kv-a. capacitor at a cost of $6318, and the savings in power costs alone paid for the capacitor in less than one year. Perhaps you can save even more. Consider also G-E synchronous motors and condensers for power-factor improvement.

GEAR-MOTOR—A G-E motor with a built-in speed reducer combined into a compact, efficient, and economical unit ready for direct connection to your machine. It will provide the desired speed at the output shaft. These units are available for use on any standard a-c. or d-c. power supply. Wherever you need a dependable low-speed drive that is low in maintenance and high in efficiency, specify G-E Gear-motors.

COMBINATION MAGNETIC SWITCH—An across-the-line magnetic starter and a fusible or nonfusible motor-circuit switch all under one cover. Compact, simple, easy to install. In modernizing your mill, it will pay you to look into these combination switches because they'll reduce installation costs, save space, and improve appearance.

SCREENLESS MOTOR—Here's a motor that will help you lower 1933 maintenance costs. It has no screens or protective covers to be removed for periodical cleaning. It is equipped with large ventilating openings and specially designed fans that force large volumes of air through the motor. Any lint or dust that may be present is forced out with a blast of air. The result: a cleaner, more efficient textile motor that assures money-making modernization for you.

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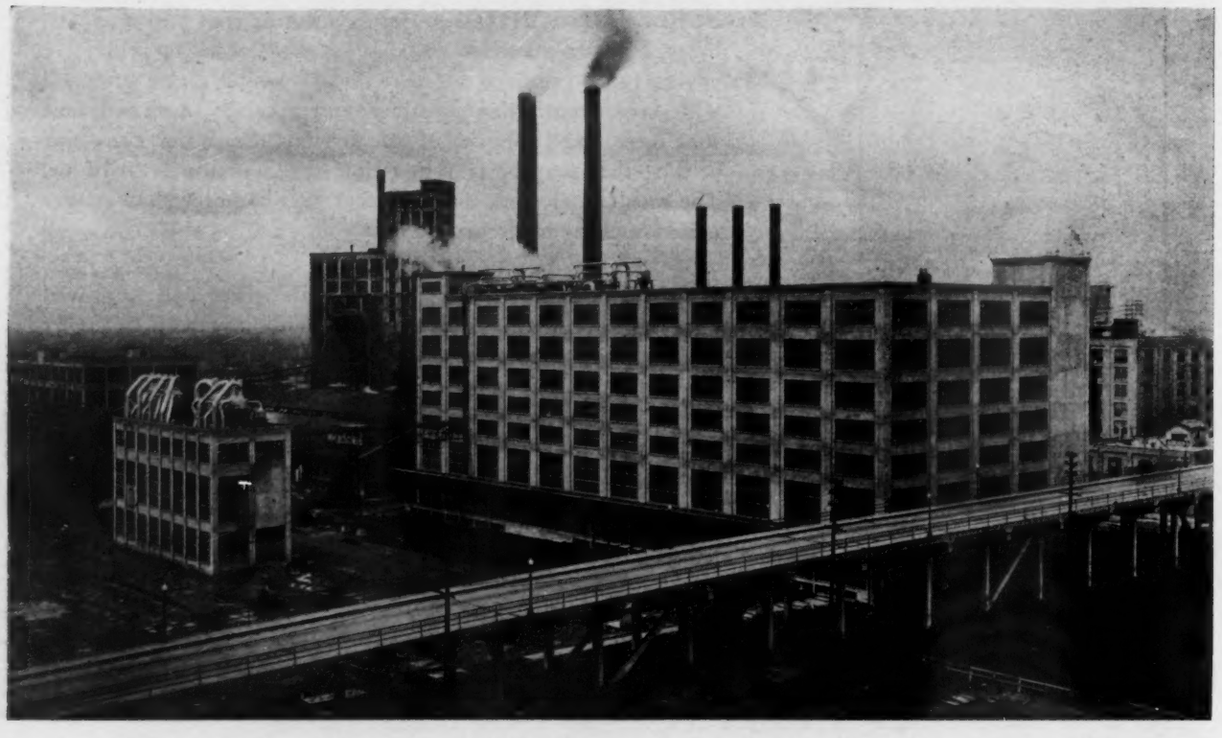

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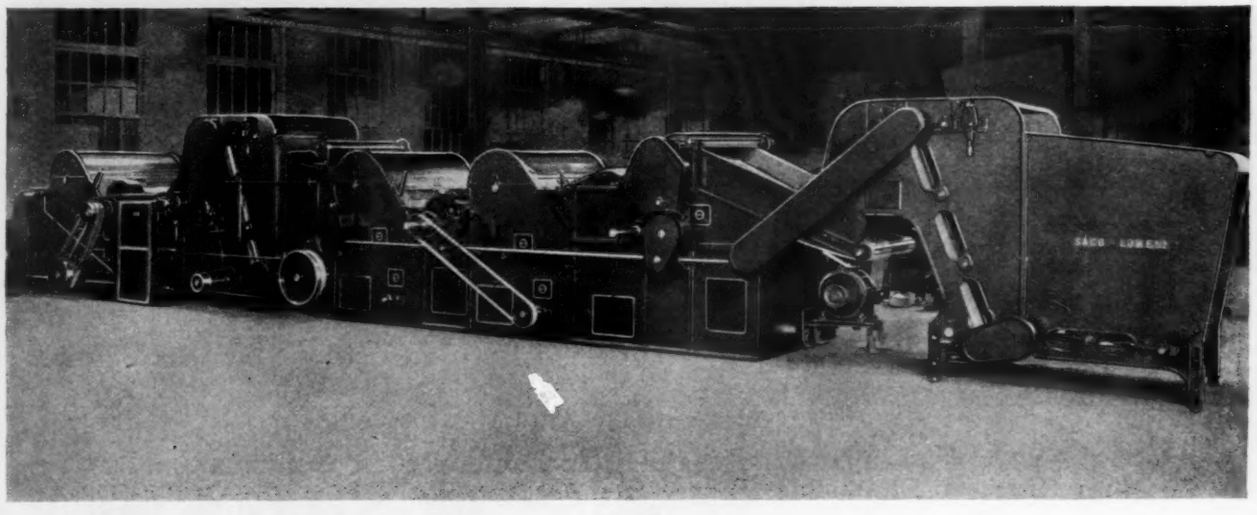

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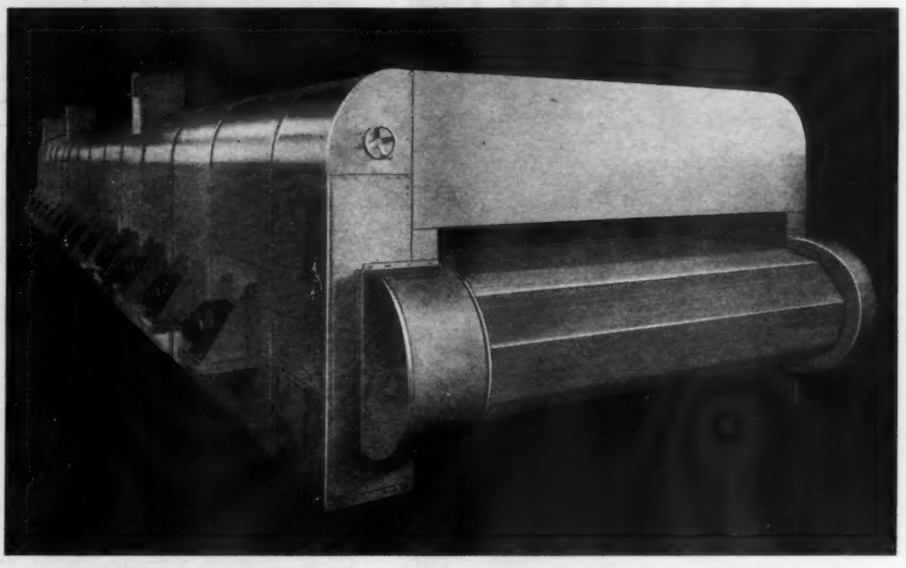

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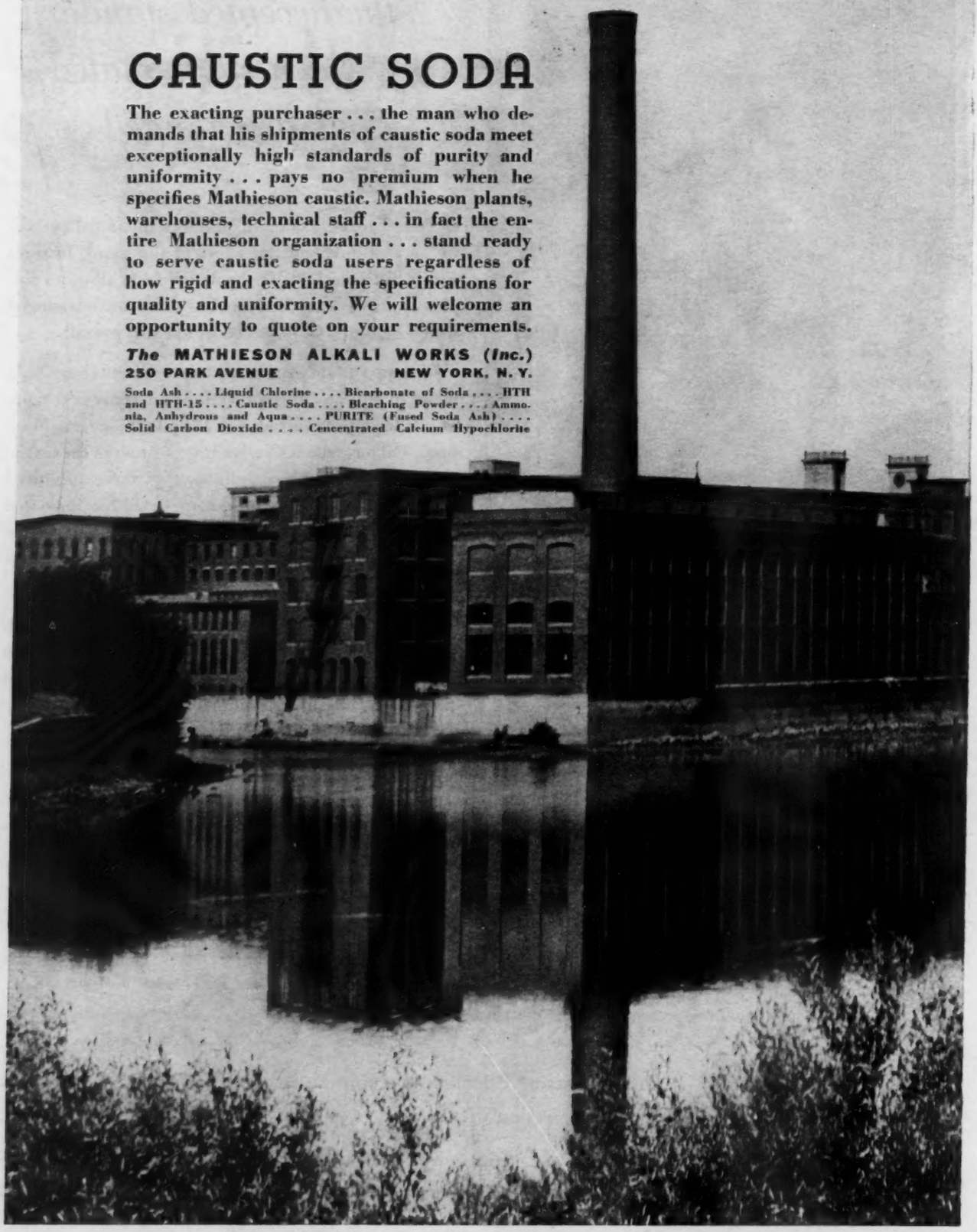

Vol. 97 **COTTON** No. 2

February, 1933

W. R. C. SMITH, Publisher
T. W. McALLISTER, Editorial Director

ROBERT W. PHILIP, Editor

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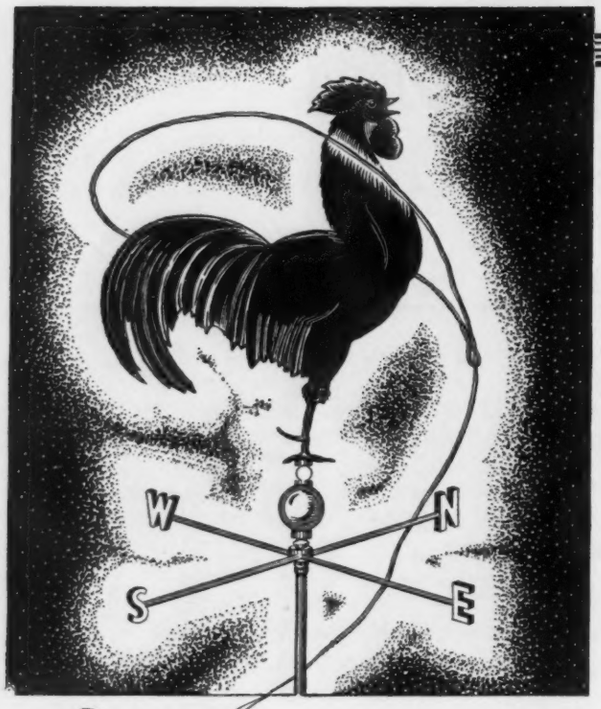

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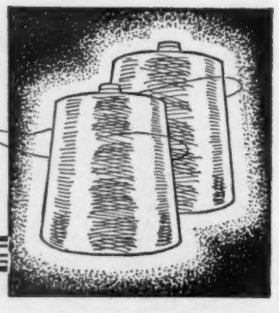


Vol. 97
No. 2

COTTON

February,
1933

BUILDING FOR PROFITS

The applications of this thought, in its broader interpretations, are thoroughly discussed in the special contributions to this issue, which are designed to stimulate thought and action along this line . . . . .

THE central theme of the leading articles in this issue of COTTON is "Building for Profits." We refer of course to the adoption of the purpose and intent of the theme by the textile industry, in its various branches.

The theme is interpreted here in the broader meaning of "building"; that is, it is not restricted to actual construction work or plant expansion entirely, but rather is construed as meaning the building up, not only of plant, equipment, etc., in the physical sense, but as well of better methods, policies, attitudes, etc., on the part of the industry as a whole, and by the managements of the individual units.

From the industry-wide point of view, with this approach to the theme, the first step is the determination of the foundations to which the industry must start its program of building, or building up. On page 26 Mr. Sloan, in his analysis of the cotton-textile division, sets forth a platform which could be considered as applicable to all phases of textiles—and to almost any individual mill—as an ideal sub-structure upon which to build for profits.

In a brief and extremely readable article on page 24, Mr. Field points out the situation in cotton spinning, statistically, and makes authentic prediction as to what must be done by the industry, and by each separate mill, for the restoration of general profit-producing activity.

Style and merchandising appear to be the chief requisites in a profit-making formula for that increasingly vigorous section—rayon weaving. On page 38 Mr. Rose clearly cites how further progress may be made in that field.

Plant modernization, costing, employee training, village improvement, and employment methods are some of the factors discussed on page 30 by Mr. Welsh, who then ventures into broader fields with some interesting proposals.

Full-fashioned knitting is used mainly by Mr. Reifsneider, page 95, in covering the knitting phases of the industry.

As a result of the times through which the industry has been passing, it is but natural that there should have been a lack of adequate attention given to maintenance of such factors as roofing, floors and window sash. The Arkansas traveler, you know, said, about his leaky roof, that when it was raining he couldn't fix it, and when it wasn't raining, he didn't need to. Such a doubtful policy of resignation to conditions may be appropriate to the characters of our literature, but it has no place in the philosophy or program of textile mill operation. The dangers of damage to equipment, goods and other property, and the risks taken as to safety of operatives, are too great to permit the neglect of any slight deterioration which will develop into a much larger item of risk and direct expense.

Mr. Emerson's article on page 34 forcibly points out the importance of adequate maintenance, and shows that it must be considered as a vital part of a Building for Profits program. Maintenance is obviously worthy of full consideration; it truly equips a plant for more efficient operation, and the very conditions that have intensified the need for work along these lines have provided the opportunity for carrying it out, immediately and economically—material and equipment at their lowest prices; an ample supply of ready labor. The utilization of these will constitute a step toward a general improvement, for which we hope textile mills will be ready, through having equipped themselves by means of an intelligent program of Building for Profits.

The special articles in this issue are published as an effort to stimulate and intensify thinking in this direction, by presenting, from men recognized as outstanding in their respective fields, constructive thought and opinion and recommendation applying to their parts of the whole textile industry. You will find in their articles no superficial, enforced optimism, no empty phrases about turning corners; but rather a sensible intelligent analysis of the industry, in its component parts, and constructive suggestions for a program, by the industry and by the individual mill, of

Building for Profits.

PLANNING

By E. G. Field

A FACTUAL resume of events leading up to the present situation in cotton-textiles; an analysis of some of the fundamental conditions, those which must be eradicated and those which must be strengthened, in an industry-wide program of "Building for Profits"; some authentic predictions as to what the industry and its individual units must do to make 1933 a profitable year . . . .

HAVING just passed through an extremely trying year, attention is now turned to the profit possibilities in 1933. While last year was bad for the industry as a whole, many mills had reduced the previous operating losses and some had returned small profits. The outlook for 1933 points to a continued competition between plants that will force more properties into idleness.

Going back a few years it is quite apparent that there has been a continuous decline in the total number of cotton spinning spindles in place since the year 1925, when the maximum number of 37,929,000 was reached. Last year there were 31,708,000 spindles in place, which corresponds to those reported in 1912. This continuing decrease is being brought about by the growing competition of other products, by the continued transfer of spindles into sections with mills running more hours per week, and by the improvement of equipment that contributes more production per machine.

BUILDING FOR PROFITS
must include a thorough analysis of the mill's financial position

Back in 1923 most of the spindles were in operation as shown by the statistics that 97 per cent of the spindles in place did operate during that year. There has been a definite down trend and in 1931 only 89 per cent did attempt to operate at any time in the year. The figures for 1932 will be lower. Thus competition is taking its toll.

Volume Sacrifices

While some improvement in sales volume may be expected with recovery, it must be kept in mind that recent experience has shown more volume to bring more intense competition. This is especially true in that mills will be restarted with any rapid improvement in the placing of sales and will afterwards compete in order to remain in operation. Since the increase in total volume will not be large, it is to be expected that there will be more competition between plants.

Management must now free itself from the volume complex that has been so pronounced during the last several years. There has been too much emphasis placed upon making more goods as the means to make more profits. Had the goods been sold at advantageous prices, then that additional volume could have contributed more profits. But there is no chance for profits unless the goods can be sold to a consumer-customer and the campaigns for volume operations have not produced new business for the industry. Obviously all the mills in the industry cannot sell goods at double-shift prices and expect to obtain that volume of business. Two selections are possible: (1) that the industry distribute the available sales between plants, and (2) that a part of the industry shut down leaving available sales to the low cost mills.

Distribution of Sales

The first solution does not appear probable in that no method has been provided to distribute the sales between mills. The voluntary reduction of working hours has been unsatisfactory because not generally applied and because it must distribute the losses and thereby make the modern plant suffer to continue the inefficient producer. In 1933 there will be much less disposition for individual mills to injure themselves in order to benefit others. Although a distribution might be brought about by legislation limiting the hours of work it is probable that no state will choose to damage its industries and further drive taxable business into other sections and thereby throw more residents out of employment.

Another factor that discourages any attempt to divide sales between mills is that of price. Back several years, the selling prices became based upon double-shift operations as a means to earn a profit for the older plants having low values and for the newer plants with the latest equipment. In between those classes of plants there were many mills economically managed that showed profits while operating only a single-shift.

Planning Volume

With much of the saving from overtime operations already passed along to the customers, from where has the recent price decline been supplied? The cloth price decline has far exceeded the fall of cotton price. Some of the decline has been contributed by cutting wages, supplies, and other expenses. Much of the price decline has been contributed through setting down cost figures that assume full double-shift operations and include almost no depreciation or other reserves. The costs have been pared and then limited to the actual out-of-pocket expenditures.

With goods being sold on that basis it is apparent that the second solution will apply. Production will be balanced to sales by the elimination of the unnecessary part of the productive facilities. This can only

FOR RECOVERY

Wm. H. James and Associates,
Atlanta, Georgia

Mr. Field maintains close contact with textile cost and engineering work . .

be accomplished by forcing out of business the marginal producer who has been drawing on his capital. Admittedly the method may not be socially or economically desirable but there can be little question that it is the proper expectation to have for 1933. While it may work some immediate hardships, especially where plants are forced to close, the present disadvantage will eventually be offset by the object lesson that may be given to some mills that previously may have failed to co-operate in curtailment programs. This prospect of more intensive competition warrants serious consideration. Alert management will now organize its plant operations, expenditures, and payrolls on a basis of single-shift capacity for the minimum expected volume at the low season in the summer period. In fact the budget should be balanced at the minimum expected level and definite plans made to handle all additional sales volume through running more hours per shift or by the putting on an additional shift to meet the peak demands.

The volume to be selected as the minimum and proper single-shift basic organization presents a problem for each mill according to its section of the industry and ability to serve customer needs. In general it may be that last year's volume will prevail again. It is probable that a very hectic period may result should some of the proposed legislation be passed in Washington. On the other hand, an enlargement of sales volume will soon be necessary to meet any general business improvement and eventually there will be a shortage of consumer-goods that will cause a favorable increase in volume. If that volume change can be met with sound prices and reasonable deliveries so as not to return many idle spindles to competition, then the industry will present a balanced condition that has not existed for several years.

Cotton Spinning Active Spindle Hours in Entire United States

(From Bureau of Foreign & Domestic Commerce)

Year	Spindle-Hours (Millions)	
1922	92,701	
1923	99,508	
1924	80,275	
1925	94,600	
Four	91,771	Average
1926	97,027	
1927	104,450	
1928	92,729	
1929	99,900	
Four	98,527	Average
Eight	95,149	Average
1930	76,680	
1931	77,795	
1932	70,218	
Three	74,898	

The things most desirable for early application by progressive mill management, also indicate some of the other essentials to be generally considered by the industry. More attention must be given to rewarding individual effort in accordance with the way in which that effort contributes to the ultimate profit. The compensation of officers should be dependent upon the profits and the entire wage schedule of officers, supervisors, machine operators and laborers should be equitably planned in line with the profits available at existing price levels. Then all efforts should be measured so that each individual will earn in proportion to his contribution to the final results.

A better spirit of co-operation is now possible. Between the plants comprising the industry, there may be developed an improved co-operation in the solution of many of the industry's problems. Less time devoted to the making of rules that are not enforceable and less thought to devising penalties as threats can be used to individual advantage, when there is a more demonstrable general effort to co-operate for the general good.

Within the mills there will be further developed a sounder co-operation between labor and management. The workers must have employment first and the combined security and regularity of work is of all importance to the industrial family. This community of interest has been proven. Labor has suffered but has not complained. Further reduction in wages may be necessary in some instances in order to obtain work at this time. But with improvement the workers rightly can expect the management to be equally prompt in adjusting the wage level in accordance with the possibilities. Co-operation within the mill has already entered a new period with a promising outlook.

Costs must be examined and the budget restudied that the management may plan the course of the 1933 profits upon use of sound principles essential to recovery. The improvement will be demonstrable and

(Continued on page 62.)

The Fundamentals of

THIS article, prepared exclusively for this "Building for Profits" issue, presents the thoughts of Mr. Sloan on this important subject. Based upon the cotton-textile group, it is just as applicable, in its fundamental conclusions and recommendations, to the other branches of textiles as to the largest element, cotton, whose Institute Mr. Sloan heads.

THE first step in determining whether an industry is building for profits is to define what constitutes a foundation for profitable operation. While an almost endless list of helpful factors might be prepared, the more important fundamentals are so obvious that they immediately come to mind. The list should clearly include:—

(1) A plentiful source of satisfactory raw material easily accessible and relatively inexpensive as compared with the price of the finished product.
(2) A sufficient quota of skilled labor.
(3) Capable managerial talent.
(4) A consistent and increasing demand for the industry's product, which is better assured if this product is versatile in character and comprises items of necessity and of common interest to the general public.
(5) Adequate and efficient plant facilities and equipment.
(6) Sound administrative policies and methods, including adequate financial structure, flexible and effective methods of distribution, knowledge of markets, recognition of consumer needs and desires, familiarity with industry statistics and the industry's relation to other industries, accurate advance knowledge of costs, etc.
(7) A recognition by all elements of the industry of their community of interests and of the necessity for co-operative solution of mutual problems.

While the foregoing is but a bare outline, it is sufficiently significant to contain material for many texts.

None will question the abundance of our cotton textile industry's supply of raw material. Indeed, as in many lines of effort today, it is a major problem to determine what can be done to reduce the supply with which we are surfeited and which is for this reason already so inexpensive that it seems almost incapable of supporting those who raise it. There would likewise be no denial of the existence of a highly skilled labor supply so abundant that, to provide reasonable employment for their workers, mill executives are tempted to risk manufacturing more goods than can be sold to advantage.

Though less obvious, it is evident that the industry has its full share of managerial ability. I believe all will agree that, during the trying years we have been experiencing, it has required consummate ability to operate a cotton mill with profit, yet we have repeatedly seen this done although such records are, of course, all too few. Many of the leaders in the industry are of national prominence or are regarded as citizens of special consequence in their local communities. Moreover, our excellent textile schools and other institutions for technical training are constantly adding to the quota of talent from which the industry may select its executives.

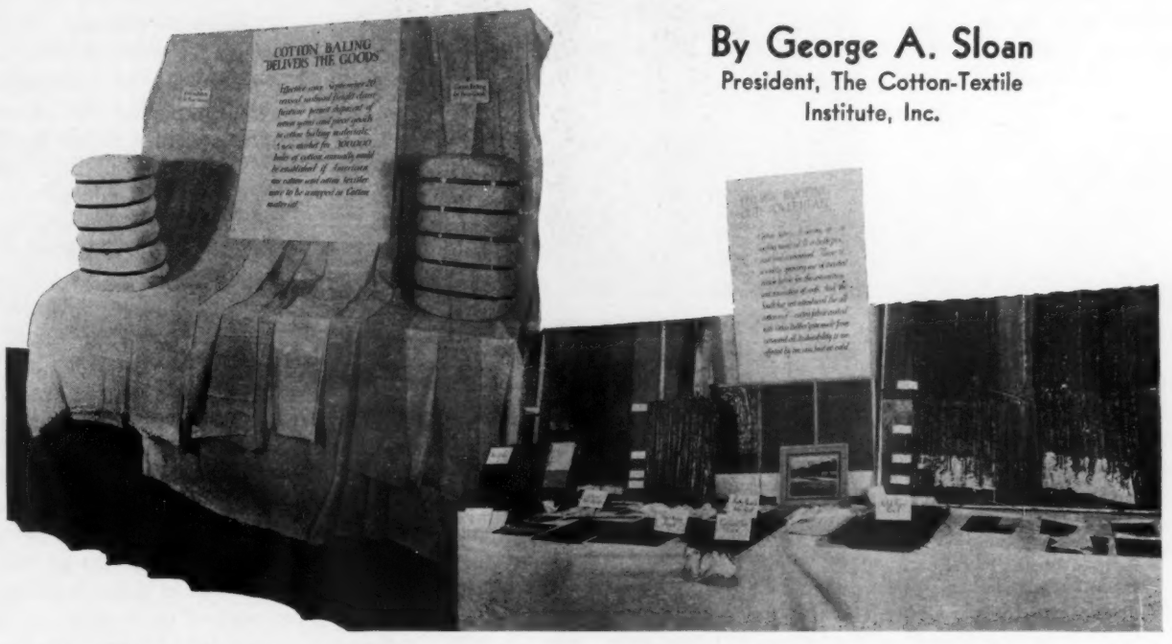
The product of our cotton mills has a versatility and appeal which are almost unparalleled in the industrial sphere. It is worn or used by all elements of the populace from the cradle to the grave, in illness and in health, in recreation and in service. In many of its uses it has no substitute and is therefore a necessity. None can deny its great adaptability and its many characteristics, including coolness and warmth as needed, lightness, pliability, cleanliness, affinity for dyestuffs and lack of irritating qualities. The product of our American mills is second to none, it has the interest and goodwill of the entire public, and has avenues of distribution too numerous for mention.

In relation to plant facilities, the industry's efficiency of operation seems amply demonstrated by the low costs at which its products are processed. That its equipment is adequate is shown by the repeatedly emphasized fact that the great demand for cotton goods in recent years could have been met by the daytime operation of all the available equipment. When night operations are pursued to any great extent the industry finds itself with more usable machinery and buildings than can be operated steadily on a full day schedule at prevailing hours of labor in the mill communities.

In brief, so far as raw material, personnel, plant and channels of distribution are concerned, we are not only plentifully supplied but indeed over-supplied. Why then should we need to build for profits? Why can we not conclude that here is a profitable situation made to order, the only remaining effort being to employ these assets and to accumulate the profits they would imply? In general the answer to these questions is found in the very surpluses I have mentioned

PROFITABLE OPERATION

By George A. Sloan
President, The Cotton-Textile Institute, Inc.



Two effective Institute displays illustrating the uses of cotton material for baling and roofing purposes.

and the industry's inability thus far to overcome completely the problems they have caused. For this reason it continues necessary—and more necessary than ever, in this present period of worldwide depression—energetically and co-operatively to build for profits.

I believe that the unprejudiced observer will agree, in the light of what has been taking place, that constructive progress of this sort is manifest—at least in respect to those circumstances which the cotton manufacturer is in a position to influence.

Surplus plant facilities, which must be conceded so long as excessive hours of operation prevail in some quarters, can be overcome by more moderate use of them, by stimulating an even greater demand for cotton products, and in a very slow but natural way by plant obsolescence. All these methods will also tend to overcome the surplus of raw material and of personnel. If equipment is used more moderately, those who distribute our wares will be less fearful of market declines, less hesitant to purchase our goods in quantity, and more willing to carry adequate inventories and assortments which will attract the ultimate consumer and stimulate sales. This will make for orderly merchandising and for greater consumption, both of cotton and its products.

BUILDING FOR PROFITS
is an industry-wide problem that affects each individual company

Direct efforts to increase demand through stimulation of consumer interest and through discovery of new uses or applications of cotton materials will likewise give greater employment to mills and cotton growers and to their employees and equipment. Sales increases through either of these methods, accompanied by the observance of more uniform and moderate working schedules will—in addition to providing more widespread employment and consequent increased purchasing power in mill communities—lead to greater prosperity among cotton farmers by the broader markets for cotton and the improved price which would follow the reduction in cotton surplus. Increased prosperity in these farming communities would again be reflected in additional cotton consumption which in turn would benefit all concerned.

As cotton mill machinery becomes obsolete it is to be assumed that, following the difficulties of the last few years, some mills will cease to exist. While this is a disagreeable outcome to consider, it is one to be faced and it will provide another factor in the direction of greater stability through balancing production with demand. Companies which manufacture cotton textile machinery have been making remarkable improvement in machine design during recent years and have hastened the factor of obsolescence. This promises to become an increasingly important consideration.

Suppose, however, that the demand for goods had been greatly increased and that all manufacturers were willing to adjust their production to demand and that the surpluses of cotton, of labor, of machinery and of goods could thus be overcome. Would profits even then be assured without a knowledge of industry-wide statistics covering production, sales, inventories, etc., and without dependable fore-knowledge of the cost of each product to be produced? In the absence

of the sort of statistical information referred to, however constructive and cooperative the attitude of the individual mill management, there would be little to serve as a guide in determining the appropriate rate of operation or in indicating the impending expansion or decline of a given market. Comprehensive statistics assist the mill executive in planning his operating policies in the light of circumstances existing throughout all quarters of the industry.

Even with this information at hand, however, the accurate prediction of costs on individual products is essential, not only to the success of the individual mill which pursues this policy, but to general market stability as well. No matter how well informed a management may otherwise be, and regardless of the efficiency of its plant and the demand for its goods, if it lacks adequate cost knowledge it will be bound, if it employs unsound cost methods, to reject some profitable orders and to accept some orders which show a loss or an insufficient profit, unless it manufactures only one style of goods or one count and put-up of yarn. If it employs no cost method at all and has any variety of product it will be completely at the mercy of the quotations of its competitors, some of whom may be similarly uninformed or misinformed. The acceptance of unprofitable orders by mills in this position or their quotations of prices below cost tend to establish lower market levels. This condition will continue as a bearish element throughout the market just so long as there are mills in all competing groups which neglect this sort of information.

NEW COTTON DRESS STYLES

Left to right, sports dance frock of woven plaid; sports frock of waffle weave; and cotton matelasse ensemble with three-quarter length coat. (Courtesy, Cotton-Textile Institute)

I have gone to some length in describing certain problems with which cotton mills are concerned in order to show that in dealing with these problems the industry has slowly but surely been building toward profits. There has been a steadily increasing recognition of the need for more moderate and more uniform working schedules, notwithstanding occasional and temporary interruptions in progress of this kind. What has been accomplished in this direction appears in the fact that inventories of carded cotton fabrics, excluding heavy industrial goods, have stood at much lower average levels in 1931 and 1932 than during the preceding three years. Inventories in this classification have declined 28 per cent below those of January 1, 1932, and 33 per cent below those of May 1, 1932, when the peak figure of the year was attained.

In shaping their operating plans so as to approach a more nearly balanced condition as regards production and demand, the great majority of mills have had the guidance of comprehensive statistical data, collected and disseminated jointly by the Cotton-Textile Institute and the Association of Cotton Textile Merchants. This reduction of inventories in a great portion of the industry was confirmed by the *Survey of Current Business* of the United States Department of Commerce which indicated that stocks on hand in the cotton goods industry on September 30, 1932, were 46 per cent below the September average for the preceding three years, while in five other major industries inventory increases ranging from 3 to 9 per cent were noted.

In spite of this reduction of stocks the demand for cotton goods in 1932 has been such as to enable the mills as a whole to operate at a level higher than that of many other major industries. The following tabulation indicates that, for the ten months of 1922 prior to November 1st, employment in manufacturing cotton goods stood at 71 per cent of its monthly average for 1929. It shows corresponding figures for other industrial fields. The data are derived from information prepared by the Federal Reserve Board:—

Indices of Employment

(Monthly averages from January 1 to November 1, 1932, compared with monthly averages for year 1929, the 1929 figures being taken as 100)

Food Products	82.3
Leather and Its Manufactures	81.5
Paper and Printing	80.3
Tobacco Manufactures	75.9
COTTON GOODS	71.0
Chemicals and Oils	68.8
Iron and Steel	57.2
Cement, Clay and Glass	51.3
Non-ferrous Metals	50.3
Automobiles	49.3
Machinery	45.8
Lumber and Its Products	44.2

If the cotton mills had not been occupied so closely during the second quarter of the year with the constructive work of inventory reduction their employment figure would doubtless have shown an even better comparison. The benefit of this liquidation of stocks, however, is seen in the fact that in October the mills employed 37 per cent more workers than in July—an outgrowth of the heavy demand which followed the improved cotton market in August.

A further indication of the consistent and growing demand for cotton goods is seen in the fact that, from August 1st to November 30th, the American cotton mills consumed 1,901,000 bales of cotton as compared with 1,781,000 bales for the same period in 1931 and 1,605,000 bales in 1930. There has been some tendency to ascribe this gain in 1932 to the Red Cross purchases of cotton goods. In view of the fact that the 500,000 bales donated by the Government to the Red Cross paid not only for the cotton in the goods and garments purchased but also for labor, overhead and other costs of the goods and garments, our estimates would indicate that this Red Cross activity probably added not much over 50,000 bales to recent American consumption.

During late years the Institute has given particular attention to the stimulation of public appreciation of cotton in its well known uses, as well as to the discovery of new opportunities for cotton products. Special promotional effort, financed by funds entirely separate from its membership dues, have been directed to the increased acceptance and popularity of cotton wearing apparel. Without going into detail as to the wide variety of methods employed for increasing the use of cotton in all these ways, it is evident that cotton has been attaining a popularity in the style field heretofore unparalleled and that it is being applied to an ever widening field of uses. The result of the efforts to popularize more extensively the use of cotton wearing apparel is shown by the combined sales of goods largely devoted to this purpose, such as print cloth yarn fabrics and fine goods. Up to December 1, 1932, sales of these goods had exceeded their previous average for the same period in 1930 and 1931, whereas sales of heavy and medium weight cloth for industrial purposes, such as tire fabrics, had been below the corresponding two-year average. The latter situation is doubtless due to reduced industrial activity in other fields.

The Need of Advertising.

What has been accomplished in the special promotion and advertising of wearing apparel fabrics through moderate funds specially contributed for the purpose is a clear indication of what could be done with a more generous appropriation for advertising cotton in all its various forms. If you or I are manufacturing finished goods which carry their identity all the way through to the final user we make every effort to perfect them in utility and attractiveness and then spend as much as we can afford to advertise them and to tell the consumer trade about them. All such efforts—and many individual manufacturers and selling agents conduct admirable publicity programs of this sort in addition to helping support the Institute's general promotional work—place cotton in a more favorable position with the public. This improved public attitude and acceptance react to the advantage of all cotton manufacturers, whether they produce finished goods, styled goods, grey goods, industrial fabrics or yarns. The results of this increased public approval and demand will benefit all elements of the trade including mill employees, cotton farmers and the distributors of cotton and cotton manufactures. For these reasons all should regard participation in industry-wide national advertising as an investment of first importance.

In the field of cost finding the Institute has conducted an educational campaign which has been resulting in steady adoption of improved cost methods throughout the industry. A partially completed survey of cost methods which has already covered a large section of the industry, comprising approximately 17,000,000 spindles, has indicated that the use of dependable cost methods by the mills covered has increased about 135 per cent since the beginning of 1925. The survey showed that 61 per cent of these mills are prepared to compute reasonably accurate cost figures before making sales or quotations.

In many other respects the industry is making definite and increasing progress. Improved designing is providing more attractive fabrics for many purposes than ever before. Methods of eliminating shrinkage and wrinkling have been developed, while improvements in dyestuffs and in the dyeing, printing and finishing processes have added greatly to the value and attractiveness of mill products.

These achievements are all steps toward the building of a secure foundation for profits. In fact it would seem that such a foundation has already been established. Much remains to be done, it is true, but the vital element now necessary is an increased determination to secure the profits which should be available, and to establish more firmly the foundation for them through greater singleness of purpose and more consistent co-operation along constructive lines.

Much of the progress that has been made could have resulted only through co-operative effort and willingness to subordinate temporary individual considerations to long-term planning and effort for the benefit of one and all. The industry has been demonstrating the priceless value of co-operation, without which a condition of indescribable chaos might have developed as a result of the difficulties which the past few years have created. The President of the United States confirmed these views in his message to the Institute's Seventh Annual Meeting when he stated, "I am confident that much of this progress has been due to constructive co-operation in social and economic planning".

The Part of the Institute.

In stressing co-operation as the vital element necessary for building profits I do not mean to imply that the Cotton-Textile Institute of itself is by any means wholly responsible for the progress which the industry has been making. I think it only fair, however, to conclude that its efforts have contributed in a very real way to much of the improvement which appears to have been made in everything but the price structure. Its very presence and continuance provide a meeting ground for mutual approach and consideration of the basic problems of the mills without regard to geographical location or variety of product. It serves as a clearing house for the ideas and suggestions of the best minds in the industry, whether or not they are Institute members. Its utility need be measured only by the extent to which its facilities are employed, by the interest, advice and thought devoted to it by the able executive in the industry, and by the support which the mills will provide for its activities.

It is doubtless safe to say that at least four men out of every five who operate cotton mills are convinced that the industry cannot progress through strictly individualistic policies whereby each mill management hopes to eliminate its competitors. The best thought of the industry and the great preponderance of opinion favor the view that the solution of its problems depends upon a willingness to live and let live. After all, is this anything other than applied Christianity? And is there any substitute for this principle other than bureaucratic governmental regulation with all its possibilities for oppression and tyranny?

Building for Profit by Putting

By Michael Welsh

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THIS "Building for Profits" issue is an appropriate place for the return of Mr. Welsh to our columns with this, his thirteenth article. In it he has touched on some vital points, including mill modernization, building and village improvement, labor turn-over and employment problems and methods, training of understudies, and purchasing of supplies—all of which, as he clearly shows, have a decisive effect upon the profits that a mill makes or loses. . . .

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THE complexity of the deep-seated ailments of our economic system have assuredly baffled most of our renowned experts. The reputations of many of the so-called best have depreciated in even greater proportions than have the values of many of those securities and other properties formerly labelled as gilt-edge. The inability of our so-called big men to make a timely diagnosis of the sickness and to prescribe practical remedies is most lamentable indeed, but is greatly overshadowed in harmful effects by their failure to recognize previously the inevitable results of the superlative type of dissipation many of them actually encouraged and helped to make possible. The present day conditions with all of the hardships and suffering, deplorable as they are, do not represent to the writer the most distressing phase of our economic upset. Thoughts of the probable effects of our nation's inability to forestall such a depression as the present one are far from comforting.

This brief preamble to the treatment of the specific subject "Building for Profit" is not quite as unrelated as it may seem. It is intended to pave the way to a later expression of certain ideas that the writer possesses in regard to the relation of individual mills to the entire textile industry, other industries and our national economic and political make-up.

At this point in the article it must suffice to state that no individual mill can reasonably expect to realize a profit over an appreciable period of time if the textile industry as a whole is "writing in the red"; and the textile industry cannot prosper while other industries are economically paralyzed, having short schedules, shut-downs, unemployment; all of which cause curtailed spending. After a discussion of "Building for Profits" from an individual mill angle (what the unit should strive to do for its own individual direct improvement) the more important phase of the subject will be dealt with in the hopes of increasing the rapidly growing realization that "we cannot live unto ourselves alone", and that definite, fair methods of industrial regulation must be forthcoming or else some of those radical bug-bear threats each generation has heard may become living realities.

Although conditions at this time have all but obliterated profit from the practical immediate expectations of most manufacturers, a desire to make the best of the present situation and a hope that better days are ahead are stimulating many of the far-seeing executives to a program of preparation for manufacturing advantages over their competitors. The formulation of a program of preparation should not be restricted to consideration of the replacement and remodeling of machinery and equipment but should also extend to all systems and methods; those affecting personnel relationships and welfare as well as those controlling the generally recognized manufacturing and administration functions.

To mills possessing surplus funds or having credit facilities there has never existed a more opportune time for modernization. This is particularly true since construction material, machinery and equipment can be procured at extremely low prices; lower than they will be again any time in the near future unless our national system is repudiated. In case of such an eventuality our present funds would likely be valueless. It is also true that mills can better afford now to experience the slight irregularities customary to modernilation work. The additional employment afforded by such extra work is assuredly not objectionable at this time. The future will unquestionably prove that those mills who take advantage of the opportunities of the present to economically prepare for profits will be amply rewarded.

An intelligent analysis of existing conditions is indispensable to an improvement program, and should be the first step in it. Too much cannot be said about the importance of finding out all about the present status of physical property, labor, systems and policies, for upon the completeness of the job and the intelligent use of the information obtained thereby depend ultimate accomplishments.

The mingling of conservative knowledge which has been tempered by practical experience with a broad liberal vision renders less difficult the job of deciding when to and when not to discard the old for the new. The appeals of the new possess equally as many pitfalls as do the prejudices against what some "sot in their way" old-timers call "new fangled ideas". The man with an open mind who carefully analyzes both the old and the new, after much deliberation and some experimentation, should be capable of determining the relative merits of the old and the new. Such a person does not recommend

the TEXTILE HOUSE in ORDER

the replacing of the old with the new unless he is convinced that there is a *net* advantage in so doing. On the other hand, he does not make the mistake of turning his back to the new until he is sure that nothing appreciable can be gained by accepting it. A business expecting to make profits must keep pace. Those that cannot keep step with the march of time should logically expect sooner or later to find themselves ejected from the ranks.

Machinery and Plant Modernization

In considering the replacement of machinery and other equipment it is not wise to merely consider its physical condition, for when properly maintained, mill machinery is in an ideal condition long after it has really become obsolete. It is rarely necessary for a mill to have to discard equipment because of its physical depreciation, but quite frequently it is advisable to throw out good machines because improved later models have made them obsolete. Naturally enough the net advantages to be gained through either an improved product or a lower cost or both should determine whether or not it is profitable to replace. To be able to try out a new machine under the exact same operating conditions of the old affords the best method of comparing them. Some types of equipment should be expected to pay for themselves earlier than other types. Depreciation and obsolescence data gathered from reliable sources should enable individual mills to work out a sort of pay-for-itself time schedule for various types of new mill equipment. It is most advisable, before finally deciding to purchase an improved machine, to attempt to determine definitely whether or not a still better model will soon be on the market.

Familiarity with remodeling possibilities is also of prime importance in building for profit. Old machinery properly maintained can sometimes be rendered modern at a small comparative cost. The expense necessary to make the conversion, comparative results (qualitative and quantative) and the cost of new equipment are the chief points to consider when determining whether to replace or to remodel.

A mill in position to do so, is extremely shortsighted if it does not put its buildings in first-class condition while it can take advantage of the low prices of construction material and labor. The time is assuredly ripe for the construction of needed new structures, expedient changes in old ones and a general revamping of the entire physical outlay if it is needed. Scientific analyses of plants frequently reveal possible savings through a re-arrangement of departmental equipment and a change in the methods of handling stock. Due to growth not anticipated at the time of original construction, many mills are most inconveniently arranged. Such conditions render efficient operation and low cost more difficult.

Many mills have also utilized the present opportunities of low material, installation and construction costs to improve their village facilities. The remodeling of houses, installation of sewerage, improving of lighting facilities and streets are some of the village improvements made by mills during the depression. Some may feel that village consideration and other items which will be discussed later have no place in an article under the theme, "Building for Profits". In a restricted interpretation of the meaning of the title they may not, but it is believed by some that employee welfare has a distinct bearing upon manufacturing cost. In fact it is generally accepted that turnover is an important cost factor and unquestionably poor living conditions are conducive to a large turnover. It is true that turnover is not a problem just now, but in thinking of profits and building for profits the future and not the present stands out. Even if a mill should not desire to add to its present village facilities, it should certainly keep its present village property in good repair. To attempt to economize by neglecting this property is to invite an out-of-proportion maintenance cost later. This is true for two reasons; first, because the cost for the same work is cheaper now than it will be when conditions are improved; and because the difference in cost of depreciation on property which is neglected over that which is kept in repair is much greater than the usual cost of maintenance. It is firmly believed that, unless our nation collapses, time will prove that the present offers more advantageous opportunities for building, replacing and remodeling than will ever again be witnessed by those now directing the affairs of the textile industry.

Plant, equipment, methods and employees must all be considered in

BUILDING FOR PROFITS

Although building and equipment represent the two major items of manufacturing from an original investment standpoint the importance of keeping them modern should not be over-emphasized while other vital factors in industry are neglected. In building for profit the human element must be recognized as the main spring of the program. The most expensive and magnificent building in the world and the most scientific machine ever perfected would be no more than monuments to the labor and material represented in them unless they were put to service. Their true value would always be determined by the service rendered by them. Among the mills that have failed to keep pace have been some that have been very modern in so far as buildings and equipment were concerned. In many cases they have been mills with adequate capital. Yet they have failed because they failed to truly build for profit. Antiquated slipshod policies, methods and systems are out of place in modern plants.

The profit to a mill on a piece of cloth is the difference between the total cost of the cloth and

the net price the mill receives. That is elementary. Every manufacturer, whether he has an adequate cost system or not realizes that labor is a large item in his total cost. Unfortunately, however, some manufacturers confuse labor cost with wages paid to labor. Lower labor cost means to them lower wages. It is true that wage-cutting is one method of lowering labor cost. Such a method has to be resorted to some times even by the best mills (the present depression affords an example of times when wage-cutting is inevitable) but farsighted executives agree that wage-cutting is the least satisfactory of all methods of reducing cost. The labor costs in two mills with identical equipment and manufacturing the same class of goods would not bear the same relationship as would the wages paid unless all other things were equal. The fact that the most progressive mills can more than hold their own in competition with those mills paying minimum wages bears partial evidence as to the soundness of the statement. Some have found it possible to reduce materially their labor cost per pound of goods through a readjustment of machinery processes and a re-allocation of labor and duties. This was not accomplished, however, by over-burdening the employees. In fact in many cases the operatives have found their work more pleasant than previously.

Are your methods of employment up-to-date? . . . .

The Problem of Labor Turnover.

Intelligent conscientious planning must necessarily preface any such changes. No more serious mistake can be made than not to acquaint employees with the whys and wherefores of changes. It is certainly of prime importance that they be sympathetic toward such adjustment and extensions as are made, and that they be given a square deal at all times. Co-operation and loyalty have unlimited profit-making powers. In most cotton mills there are possible cost savings through the re-classification of labor according to skill and a readjustment of pay on the same basis. It is unprofitable to a mill for employees capable of doing skilled work to be forced by their job assignments to spend part of their time doing semi-skilled and unskilled work. The principles involved in this system are generally understood, but have been applied in too few mills. They have been grossly abused in a few instances, and the mills have as a direct result suffered losses rather than gained thereby. In respect to this thought it is well to emphasize again that the present affords a wonderful opportunity to build for future profit.

Turnover has previously been mentioned in connection with the maintenance of mill villages. No article dealing with such matters as cost and profit should omit the employment phase of industry. Owing to the knowledge of the vast amount of unemployment and the scarcity of jobs practically every person who has a job holds onto it as long as he can; therefore, turnover now is naturally less than before the depression. It is feared the realization that it is now costing fewer dollars to "break in" and train new employees due to a decrease in turnover has prevented many mills from taking that very important step in building for profit—that of improving their employing systems. Before briefly mentioning a few important and costly weaknesses in the average mill system of employing it would be amiss not to state that mills have a wonderful chance right now to replace undesirable employees. Regardless of the method of employing mills should certainly appraise the ability, character and general value of their employees. The truly undesirable should be replaced by worthwhile unemployed people who are competent of doing the work. When it is necessary to lay off employees the person with the least value to the mill should be the first to go and not the one who is least intimate with the second-hand or overseer.

Space does not permit a comprehensive discussion of mill employment problems and their ultimate relationship to profits, but a few of the glaring weaknesses of the slipshod methods used by many mills can be cited. In most cases a very busy man, the overseer, does the employing. Rarely ever does he know anything about an applicant's ability, health, morals or record as a citizen. An applicant's version of his own fitness for work and his ability to perform mechanically gets him the job. It matters not what contagious disease the applicant is afflicted with or what kind of a past record he may have, the overseer can spare but a few minutes to decide whether to hire the man. In a mill which is scientifically striving for profits an overseer has little time to do anything other than that which pertains directly to the machinery in his department and its production. In large departments it is extremely undesirable to have overseers devote a large percentage of their valuable time interviewing applicants. Every applicant for a job is due the courtesy of some kind of an interview, even if it is a very brief one. Worthwhile information and good will (it never hurts) can frequently be secured by talking with applicants even though there are no jobs available for them.

Then, too, it is believed that employing of labor should be placed on a plane commensurate with its importance. During the past year in many plants labor cost was three times the cost of supplies and about the same as the cost of cotton. Persons with specialized ability bought the cotton, and supplies were purchased by purchasing agents or others trained to buy them. Both the supplies and the cotton, together with thousands of dollars worth of machinery, were handled by employees who are hired and placed by a rule-of-thumb method. During normal times the turnover in most mills is more than 50 per cent and frequently 100 per cent and more; therefore, the comparisons made are not unreasonable.

Although a diseased person may be able to per-

form his individual task satisfactorily, he endangers through the germs of his disease, the health of his fellow workers. Incapacities on the part of seasoned, faithful employees can frequently be traced to a disease, carelessness or filth of newly hired labor. It is also well not to overlook the important fact that intelligent employing is conducive to safety, and that accidents are a form of waste, from which nothing other than a costly lesson can be salvaged.

Mills have too long minimized the importance of the employment problem. They are now afforded an ideal opportunity to strengthen this most important element of manufacturing. Labor is plentiful and there is no reason why mills cannot weed out and build up the personnel of their organizations. It is not contended that the overseer, the man who must work the employees, should be entirely eliminated from the employment transaction. Regardless of what system is used he should always have veto power in so far as employees assigned to his individual department are concerned. Two employment systems are recommended for consideration in "Building for Profit" programs. One is a control system; the other a complete employment system. Both call for physical examination of employees. These two systems were explained in past issues of COTTON.*

Foreman Training a Necessity.

The foreman was mentioned several times in the preceding two paragraphs. Suggestions were there made that he be relieved of part of his employing responsibilities. This should give him more time to perform his exacting duties more efficiently. Foremen and their lieutenants are important men in the affairs of a mill. In the first place they should not be kept in the dark as to the mill's plans in so far as their departments are concerned. They certainly cannot intelligently co-operate unless they are acquainted with ultimate purposes. They should be amenable to changes. If they are not they can become stumbling blocks to any program for profit regardless of its merits.

Upon the foreman rests the problem of getting out first quality production from his department at a low cost.

In striving for that end he has many responsibilities. Training employees, making his department a safe place to work in, seeing that machinery and equipment are properly lubricated and maintained, testing and inspecting, adjusting machinery and processes to cope with necessary changes of products, selling the company's policies to employees, and continuously striving to maintain a healthy relationship between employees and employer are a few of the many responsibilities of an overseer. One who cannot measure up to those responsibilities and others not mentioned have no place in a mill with a "build-for-profit" program, for each has a definite bearing upon costs and therefore profits.

*See "Some Employment Methods for Cotton Mills", page 9, November 1929 COTTON; and "An Employment System for Cotton Mills", page 378, February 1930 COTTON—both by Michael Welsh. Clippings will be supplied upon request to the editor.

Foreman training is more than a pet phase of an industrial theorist. Some method of inspiring and training foremen up to high standards is most essential. Unless a definite plan for such a purpose is followed, foremen, though possessing the most co-operative intentions, are apt to follow a hit-or-miss system in running their departments. It is believed advisable to permit foremen to compare the costs in their respective departments from period to period. They should also be given for guidance and control a maximum schedule for labor and certain other items, and should be called upon to account in detail for all excess used.

Training should not be confined to overseers. Regardless of the capacity of his service, a man's obligation extends beyond the present. A program anticipating future profits calls for the training of understudies. Each foreman, superintendent and executive should see that an assistant is trained to carry on in his place. He should talk matters over with him at all times and encourage him to realize the importance of his job. Advice and constructive criticism are indispensable in developing an assistant. The primary object of training an understudy should not be forgotten. Life itself is very uncertain; and every time a key man dies or gives up his job, the mill suffers a big loss unless there is some one prepared to take his place.

Have you definite plans for training men up for foremen's jobs? . . .

Training for efficiency and profit has no stopping point. A mill should continuously strive to increase the ability of every employee. Upon the shoulders of foremen and their assistants fall the major responsibilities in employee training, but vocational night schools have proved to be invaluable in assisting. A really efficient mill, from an employee standpoint, is one in which each person understands his job thoroughly, can perform his duties efficiently, recognizes his true relationship to the welfare of the mill, and is either prepared or is preparing himself for a higher job. Such employees are loyal. Mills in building for profit should strive to approach such an ideal condition. Vocational classes, properly conducted, will help.

A mill striving to build for profit should assuredly be able to determine when it is and when it is not making a profit. An adequate cost system should be used as a guide in formulating sales policies and operating schedules. Without such a system a mill merely gropes in the dark and is apt to push the production and sale of one style of cloth, which nets no profit whatsoever,

(Continued on page 62.)

"The most important thing about a building is its roof, and this probably merits first consideration."

Let's Not Overlook the

By Cherry L. Emerson
Vice-Pres., Robert & Co., Inc.,
Atlanta, Georgia

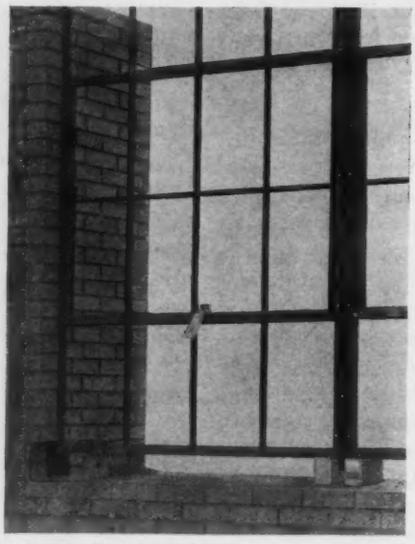
Money saved one place is just as good as that saved in another in
BUILDING FOR PROFITS

THE textile business at this time is so highly competitive and profits so small that many of its plants do not consider the time opportune for large improvements involving any considerable expenditure. However, "there is a time for all things", and while this may not be a time for expansion it nevertheless does represent an opportunity to make those lesser changes which will serve to decrease production costs or to protect the property from deterioration or decrease maintenance expense. Simply because money is not available in large quantities for major improvements, is no reason why mill managements should fail to give careful consideration to those of lesser proportion which may in the aggregate accomplish savings very worth while that will show when the year's statement comes to be written.

As a small instance, the installation of automatic heat control may save enough coal at the boiler room to pay for itself in a couple of years or less, and while doing so greatly improve humidity conditions.

Some mills are at this time making a general study of all of the small improvements which they expect to carry out or may carry out during the coming year. Frequently consulting engineers are called into go over the whole property and chart the losses which are taking place and the methods and costs of correcting them. These betterments are cataloged in the order of their importance; and with this complete "aeroplane" view of the needs of the plant, the mill is in position to take them up, one at a time, selecting those for first attention, of course, that are most remunerative.

There is a widespread expectation that during 1933 conditions will improve, but the rapidity with which the general plan is carried forward is geared to business conditions. The speed of carrying forward the revamping is made dependent on actual conditions and not forecasts. A comprehensive study of the conditions of a plant is of value to the management also in acquainting them with all of the physical details of the plan, and costs very little. The knowledge is worthwhile, even though no improvements of consequence are undertaken. This foresight moreover shortens the time which would be required to get the plant in shape should there be a quicker improvement in business than is at present anticipated.



Courtesy, Truscon Steel Co.

Present conditions afford an excellent opportunity for replacing worn sash with modern steel sash

Repairing and Insulating the Roof

While the modernization of the productive textile machinery is the most important matter affecting costs, and while this feature should undoubtedly be given the largest amount of study by the management, this article deals principally with other and smaller things, and the larger question of textile machinery and its improvement is not touched on here.

If the buildings are allowed to fall into bad repair they will in turn cause deterioration of the machinery. A number of mills have encountered difficulty with the roofs of their weave sheds. The high degree of humidity ordinarily carried has resulted, in some cases, in dry rot attacking the timbers and roof deck. This is more likely to be the case if the lumber contained sap wood at the time of its erection. This humidity, coupled with the high temperatures carried while the mill is in operation, has also resulted in the warping and cracking of the deck, so that many roofs are not water-tight, and are generally in bad condition. The most important thing about a building is its roof, and this is probably the first point which merits consideration.

Insulating material is more

AUXILIARY SAVINGS

THERE are some things which you cannot afford not to do—one of them is the proper maintenance of building, equipment and other property. Investments made in the repair of roofs, floors, replacement of sash, elimination of losses, and in the other ways suggested by Mr. Emerson in this very practical article, are proportionately small and yield great returns.

Mr. Emerson.

and more frequently being incorporated in modern mill buildings to prevent the troubles mentioned. Where a roof is in sufficiently bad condition to necessitate complete replacement, the matter of thoroughly insulating the roof should have first consideration. It usually pays in the long run to insulate any roof, and almost without exception if the roof is over the weave shed. After it has been decided to insulate, there is still a great deal to be said about how to do it. A number of materials are available, including various compressed cellulose compounds, and cork board. The methods of installing the various types of insulation have been very greatly improved during the last few years. It has been found that the method of application is really of more importance than the particular type of insulation used.

But, should the decision be made not to insulate, it is sometimes possible to remove the tar and gravel and only one or two layers of felt. The saving of the three or four bottom layers effects some reduction in the cost of the work. It is frequently possible to mop on one or two additional layers required, then renew the tar and gravel and still obtain a fifteen-year guarantee, supported by bond.

Courtesy, Robert & Co., Inc.

A modern mill village cottage. Much can be done to improve village conditions at minimum expense . . . . . .

The same condition of moisture at the ceiling, caused by low temperatures outside, which has injured the roof decking, has also frequently occasioned the necessity of replacing roof timbers. There are now in use certain methods of removal which permit these timbers to be taken out easily without any interruption of the work going on below. These methods save quite a bit of money over the old system employing "main strength and awkwardness". It is usually found advantageous to replace these timbers with structural steel shapes, usually I-beams. The timbers obtainable today are in general not so good as formerly and the difficulty of getting uniform quality in any lot of timbers is increasing. Eventually steel will undoubtedly replace wood for mill timbers throughout. In fact, very few mills have been designed during recent years using any other roof system than structural steel.

Installing Modern Steel Sash

The improvement in sash should also have its proportion of study while considering the building. Quite frequently the deterioration of wood sash has extended to a point where it must be replaced, and even where this stage has not been reached, there is still a loss due to the wood sash which is not at once apparent, but which is very real nevertheless. That is, the additional amount of heating required, because wood sash will always warp and crack, allowing warm air to escape rapidly. The boiler plant is often called on to attempt to heat part of the adjacent county as well as the mill building itself. The extent of this waste is not always fully realized. We know of a number of mills which have entirely replaced wood sash that was in generally good condition with steel sash in order to obviate this waste of coal. The steel sash of course stays put, and prevents the losses mentioned.

Where camber head wood sash is replaced, it is generally customary to square the top, using structural steel angles or channels. At this point considerable thought can be given to making the height of the openings such that standard sash can be used. Of course special sash can be obtained to fit any given size of opening, but this is slightly more expensive than standard sash. There is also a minor advantage in the use of stock sash, as well as standard. About the only saving here, however, is quick delivery, which is of no interest unless the work must be prosecuted with great rapidity.

In the width of the windows, frequently the standard sash can be adapted by the use of a plate inserted in the brick work, the plate in turn carrying the steel sash. Thus a narrower standard sash can be adapted to a window which would otherwise require a special sash. The standard sizes of lights with steel sash are 12x18, 14x20, 12x20 and 14x18. While of course the best practice in new mills requires a design of sash which will make all lights uniform, in old mills it is sometimes better to use two or more light sizes, if the window openings vary and if such change is required to permit the use of standard sizes of sash.

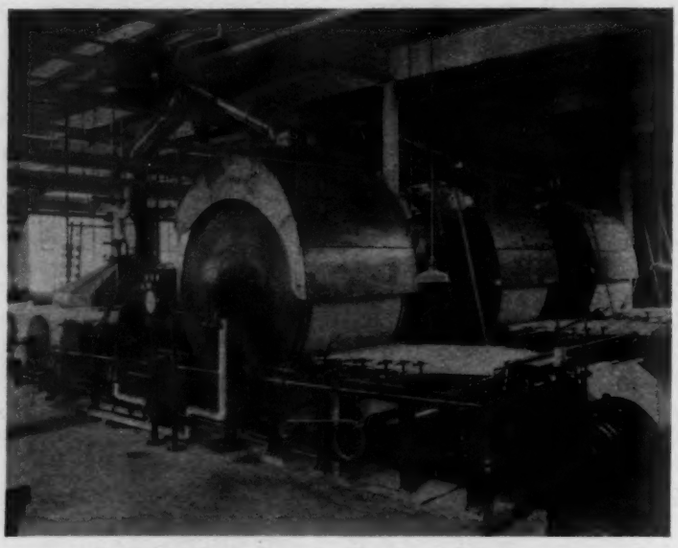
Painting Up the Mill and Village

If steel sash is already installed in the mill, thought should be given to the painting of it. It is appalling to contemplate the amount of waste that is taking place in industrial properties all over the country, simply from the lack of a little paint!

And this same care could be extended throughout the entire plant and village. Where a mill has many operatives idle, occupying houses for no rent, and with other concessions, it would seem the part of wisdom under existing conditions to use a few gallons of paint and keep some of these people occupied under a regular painting schedule, which is one of the cheapest investments that can be made. Adequate painting not only preserves the property against undue maintenance expense, but also adds to the general morale of the organization.

Re-Flooring the Mill

Having repaired and insulated the roof, installed steel sash and painted up the interior of the mill and the village, we come to a consideration of floors. A similar procedure to that outlined for painting is suggested here. The mill may order one or more cars of maple, depending on the floor area — the idea being to have at least a one-car order to decrease freight costs—put this flooring in the warehouse and issue it on requisition to a small crew of men who would, over a period, carry out the re-flooring operation, starting naturally with that part of the mill that is in the worst condition. Here again the program could be speeded up or slowed down, dependent on business conditions. At the end of the period the mill would have a satisfactory floor deck, reducing greatly the wear on roving cans, trucks, etc., and minimizing the amount of future floor maintenance.



Courtesy, Robert & Co., Inc.

View in recently equipped slasher room of Bibb Manufacturing Company's Columbus, Ga., mill . . . .

Some mills have made the error of making replacements with a cheap grade of flooring, which has rapidly worked out and in the end greatly increased the expenditure for this purpose. It will pay to buy hard rock maple, which comes in three grades: Clear, No. 1 and No. 2. The advantage of the clear grade is largely in appearance. For ordinary industrial purposes, the No. 2 grade is sufficient. This should be square edge, rather than tongue-and-grooved, as the later replacement of tongue-and-grooved requires tearing up a larger area of floor. If the mill would undertake this matter of painting and floor repairing with its own crew, buying the materials in bulk lots, the cost would be inconsequential.

Studying Losses of Power

Aside from the building, there are a great many matters which are deserving of attention. With the present high cost for electric power, it is well worthwhile to consider the friction losses which exist in all mechanical drives to the machinery. Weave sheds, which are driven by overhead shafting, will frequently show a nice saving if anti-friction bearings, of which there are a number of different types on the market, are installed.

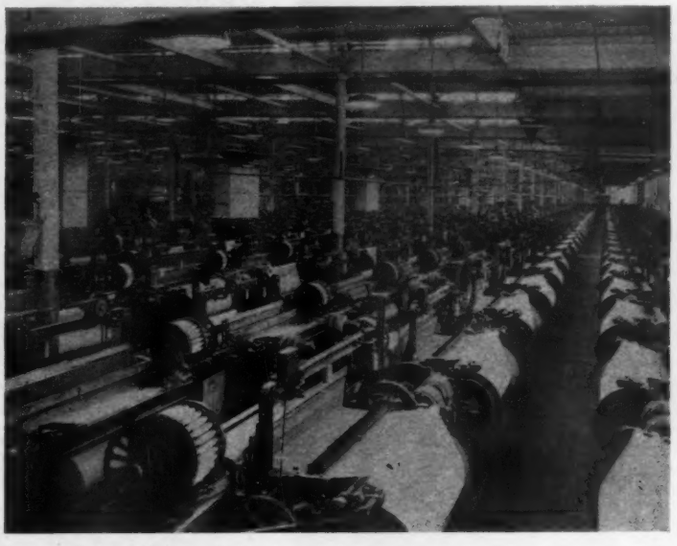
There has been steady progress in the reduction of the average size of motors used in the plant. In the early days of the electrification of the industry, it was common practice to use 100-hp. motors. In many mills today, the average motor horsepower is less than five. Of course, considerable expense is involved in completely changing the motor drives of a cotton mill and in the installation of individual drive. This, however, is being done by those plants which are able to afford it. Every mill which has its spinning driven in a large group could give thought to the four-frame drive at least.

There is a recent development in individually-driven spinning frames which achieves a result long desired, that of increasing the speed of the spindles as the bobbins fill. This variable speed spinning is accomplished under the latest method by means of a mechanical device similar to that which has been in use by finishing plants for many years. There is a double cone pulley, with the cone apexes opposed, carrying a wood slatted chain between the conical faces. These faces are moved forward or away from each other by means of spring tension, thus changing the diameter of the driving pulley. The tension in turn is increased or decreased by moving the motor and all of its appurtenances closer to or further away from

the driving shaft. The motor movement can be controlled by the builder motion of the frame, so that automatically the speed of the frame is increased as the bobbins fill. In certain tests which have been run very large increases in production have been effected, amounting to as much as 20 per cent and more.

Checking Up on Drives

In any thorough-going, comprehensive survey of the plant, every drive—mechanical and electrical—should be under suspicion, and many of them could be improved. Some mills have successfully carried out an electrical testing program, and have found certain motors considerably underloaded and others overloaded. By making exchanges, one mill to our knowledge has greatly bettered its situation on several hundred motors, while the only purchase required was that of two 10-hp. motors. Even if it is impossible for a plant to go to this extent, it can at least make sure that all belts are tight and in proper condition so that slippage is at a minimum.



Courtesy, Robert & Co., Inc.

Scene in new weave room of Bibb Manufacturing Company, Columbus, Ga., equipped with Model X Draper looms . .

This leads to the consideration of the matter of speed surveys. It is possible in the average sized plant to keep one or more men busy testing the driven speed of machines, to make certain that every one is up to its maximum standard and doing its part of the production work. These speeds, if taken regularly and tabulated on a standard sheet, will give the superintendent a great deal of worthwhile information. This same man, or group of men, should also keep records on temperatures, humidities, and other conditions surrounding the manufacture of goods. In this connection it is well to remember that at the present time one of the cheapest commodities available is brains. There are so many young men who graduated from college a year or so ago, now without employment, that it would be possible to recruit men sufficiently intelligent and with adequate training for such work at a minimum cost. The service which they could render in keeping a check on manufacturing conditions which in the average mill are disregarded would effect a saving very much worthwhile.

Looking at the Power Plant

To consider a still larger field and one which may require considerable expenditures, we should mention the great amount of interest now being evidenced in power plants for the individual mills. The cost of purchased power is now so extremely high, relative to all other costs, that this is a matter of concern to nearly all textile plants. With the existing low cost of coal, a most attractive set-up can be worked up for the power plant. Most mills feel, however, that they could use in their financial operations or otherwise the large sum required for the installation. It is our impression, however, that unless general conditions change, a good many mills will find a means to install modern plants, which, by the way, are much more economical of operation than they were, say, five years ago. There have been many large and small improvements in power plant equipment, rendering the present-day installation more efficient, safer, and more reliable than ever before.

In those industries where a power plant cannot be considered, there are fine opportunities for economy, even in the heating plant itself, which are generally neglected. All of these boiler plants should be provided with the necessary instruments to show how much water is being evaporated, what the draft is, what the CO_2 is running, the flue gas temperature, and other information which, if given to the fireman, will enable him to know what he is doing.

The small type of stoker which was originally developed for home use, with a single retort and fixed tuyers, has now been designed for larger size boilers and is quite satisfactory for use up to or even above 150-hp., h.r.t. type.

Our suggestions that mills at this time should make certain of the improvements herein outlined is predicated on two facts. One is that many of these improvements pay for themselves as they go along; in reality they cost the mill nothing. At the end of a period of one, two or three years the improvement has paid for itself and the mill continues to get the benefit of it until the equipment wears out. The other factor is that nearly all of this work can be done cheaper now than it can be done again in the usual cycle of seven to ten years. We are now beginning, or will in a reasonably short time begin, on the upcurve of increased business, increased production and, therefore, increased prices. While such programs of improvement do undoubtedly help the country in its recovery, the only argument advanced here is that of enlightened self-interest. A brief study by competent outside engineers or even by the management itself, without outside help, will undoubtedly show many places where true economies can be made. Not to make a study is false economy.

Mr. Rose.

STYLE and QUALITY

STYLE and quality, while not the entire formula for success in rayon weaving, constitute essential factors. We asked Mr. Rose to give his views on what the rayon yarn consumer must do in "Building for Profits", and here is his response; interestingly written and based upon an intimate and authoritative contact with the rayon users' problems and opportunities . . . . . .

MANY times in the past few years mill men using rayon yarn have been heard to say, "Oh, for the good old days when rayon was two dollars a pound!" In view of the present price of sixty cents such a lament sounds strange coming from the purchaser of the yarn. In what way was the knitter or weaver better off when he paid over three times today's price for his raw material? Was business so much better then than now? If we compare the business by volume the answer is no. At least the same volume of yarn is going into the knitting trade, and a much larger volume is going to weavers. It is not the weight volume that they miss but the margin of profit. The profit in those days was aided by two conditions.

The rayon market was very stable. The list price remained unchanged for a year or two at a time, and lines became well established in the fabric markets. Buyers could count on hose in dollar numbers or fifty cent numbers or thirty-nine cent numbers season after season. They all knew the price of rayon but thought little of it between the infrequent changes. There was no speculative element in the yarn end of the business, for conditions usually warned when a price reduction was imminent, and inventories could be held down.

BUILDING FOR PROFITS

by rayon users means "getting in and getting out" at the right time

The high price of yarn on a stable market provided more margin of profit. There is more leeway for profit in a pound of merchandise retailing for two-fifty than in the same pound retailing at one dollar. Hosiery prices varied by quarters then as against nickels or pennies today, and where several cents a yard was a normal profit on a woven fabric then it is only too often a matter of a cent today or even a fraction of a cent. Competition was as keen then as now between mills using rayon, but the condition of the country's financial structure, which we now describe as inflated, gave everyone more elbow room. The very word inflation implies an artificial condition of strained equilibrium and questionable security. It is generally conceded that we are now working on a more normal price basis than at any time since the war. During the war all the forces of industry were harnessed and concentrated on a common purpose. It is natural that industry would not forget or discontinue over night what it had learned from forced production, but now that a new tempo has become established we might see what tune is best suited to it. There are approximately fourteen textile industries using rayon. Each has its own problems, but as the weaving industry uses the majority of the rayon yarn consumed in the country today we might confine our attention for the moment to a few of the points that lead to profits in that field particularly.

In merchandising rayon goods it would seem almost self-evident that a mill would figure its cost, add a profit, and sell at the sum. With production speeded up, as it has been since the war, and with the field highly competitive, as is almost any profitable business today, the mill cannot always obtain a price that includes profit. The mill owner has a just sense of responsibility to keep his help employed for their own good on the one hand, and he feels the necessity of keeping his organization intact for his mill's good on the other. He has looms standing and help idle when a large contract is offered at his cost figure with the information, probably quite true, that the business can be placed elsewhere at that figure. If it happens to be the beginning of the season and he takes such orders sufficient to fill his looms, then his mill will run through the profitable period beaten before it began. If he turns down such orders and the season does not show a sustained demand, then his mill may not run at all during the season.

A compromise between the two extremes is the usual conservative course in merchandising rayon goods today. In the first place a mill no longer tries to run rayon half-heartedly. Weaving rayon is beyond the tentative stage. The successful mill determines what type and class of goods it will make and

IN RAYON WEAVING

By H. W. Rose
The Viscose Company

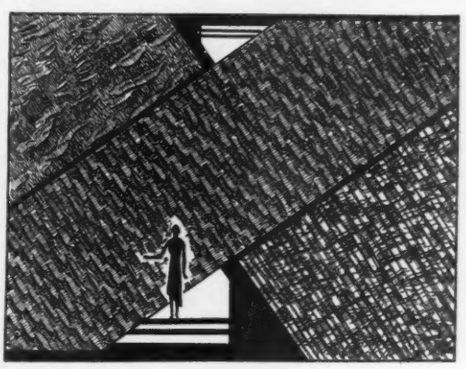
At right, an Altman gown of Seraceta matelasse, in a spring-time soft pastel, by Duplan. (Courtesy, the Viscose Company.)

installs up-to-date equipment to make it the best possible. Enough machinery is provided to produce in sufficient quantity to keep costs at a reasonable figure. The successful mill manager with such equipment realizes that he cannot compete on a great variety of cloths with a few looms on each. He knows that for each variety of staple goods there will be a mill in which that variety is the back log, if not the total concentrated production. He decides which type of goods will be the back log for his own mill. In case of doubt as to the potentialities of a market, he could sell up that block of looms at a small profit, but the rest of the looms should be held for better prices. The question of holding for better prices is the real test for courage and business judgment.

Sometimes there is needless giving away of profit. All of the rayon yarn bought at the lower price prior to the September raise has now been shipped out. Therefore yarn being shipped today as well as all yarn bought since September is at the higher level. One would think that all goods on today's market would accordingly be priced on today's rayon list, and that the man with low priced yarn still on hand would be glad for the additional profit, but in a few cases rayon goods are still offered based on the old price. For some reason known only to himself such a merchandiser is not only giving away his own possible extra profit but is retarding his market from readjusting to the level on which he must compete within a few weeks at the most. The ability to refuse a low priced order last July or August has repaid many mills during the exceptionally good past six months.

After the back log has been established, if the rest of the looms are not held merely for better prices on the same style they may be devoted profitably to more seasonable or novel fabrics. In rayon dress goods the style changes are often quite sudden. Millions of yards of a new fabric have been placed in a few days' time. Obviously the mill that foresees such trends and has looms ready stands a chance of profitable operation. More important still, the mill that establishes such trends not only has looms ready but has the technical lay-out on the particular constructions. Such a mill has a start over the rest of the field and quite justly comes in for the prize money. Someone asked an old trainer for a pointer on winning horse races. "Get out front at the start," was his advice, "and improve your position from there on."

A demand can also end quite abruptly, and the same mill, to maintain the best net profit, must also be sagacious in sensing the end of a fabric's run and be ready to finish before the rest. In the rayon gray goods business it is a case of the devil take the hindmost, for the mills delivering the tail end of a run find themselves embarrassed with complaints, returns, claims, or suits. It is quite disillusioning to see a beautiful all-rayon satin, for instance, have an enthusiastic and perfect acceptance for two months and then to find the same goods being returned for imperfections that had always been in it but which could not in any way



Matelasse and cloque weaves are popular in acetate yarn warps with viscose type crepe filling. (Courtesy, The Viscose Company.) . . . .

detract from it. This technical loophole out of a contract on a waning market is one of the evils of the industry that is avoided by the mill which watches the trend and gets out. Paradoxically then the mill man who shows the best profit per yard is one who refuses orders at the opening and refuses them at the close. When he flushes a covey he waits until the birds rise and level off, then shoots both barrels before they light again; but he does not wait for some other hunter to find the next covey. He is on the scent of the next while the others are still hunting down his singles.

It is not the easiest thing in the business to establish a trend. The man who does is not only familiar with manufacturing cloth, but he knows all phases of his market. In only a few outstanding instances does one individual cover both. The other successful organizations also have very close cooperation between factory and sales. There is closer co-operation of this kind in the rayon dress goods field now than ever before. The mill man visits his New York agent and customers frequently and the agent is at the mill almost as often. In this way the two are able to sense the possibilities in new fabrics and are better able to settle on the ones that take.

This styling conference is participated in to some extent by the rayon yarn manufacturer. It is to his interest to keep posted on the needs of his customer, in order to be in position both to supply regular required numbers and to develop new yarns to meet or create new demands. It is also much to the interest of the mill and its agent to keep posted not only on yarn numbers available but on new developments and possibilities. It is therefore unprofitable today for a mill to operate on rayon goods, as so many did a few years back, by giving the New York house so many looms to keep busy, sitting back and refusing or taking orders as they come in, and then shopping around for a bargain on rayon yarn to cover. Buying of rayon should not be an in-and-out proposition, as is the case on other types of textile yarns which have an open market. Weavers have found it profitable, even though it should mean more cents per pound for yarn, to establish close and enduring relations with a yarn manufacturer.

There are many ways in which such a relationship can be mutually profitable. Some are not entirely obvious, but one of the most concrete and practical is the promoting of quality as a major selling factor. For some years the department store buyer of rayon merchandise had no way of distinguishing between various types and grades of yarn used, with the result that some goods gave excellent results, but other apparently identical goods came back on complaints. The yarn had lost its identity and the store manager had no recourse. Primarily to overcome this lack of confidence in store buyers, one of the larger manufacturers introduced the quality control plan which now has a far-reaching effect all the way from the mill to the lady who buys the dress or household material.

The quality control plan briefly is an arrangement whereby fabrics made by certain concerns are given periodic thorough tests by a neutral bureau in New York. After passing all these tests for strength, color fastness, construction, shrinking, etc., the garment or fabric is marked with a label identifying both the firm marketing it and the brand of rayon yarn used. These tested articles are then advertised as tested quality merchandise. Department stores in growing numbers place confidence in these branded lines, and women very readily have learned to seek them out in the stores.

The plan has increased the volume of profitable business for everyone down the line by establishing confidence in quality. In an actual trial a store advertised the same rayon drapery in two papers the same day, one as tested quality, the other with no mention of quality, both at the same price. In the actual store sale three of the tested quality labeled draperies were bought to every one without the label. There have been so many false bargains during these few years of lower prices that to the average shopper today low prices as such will as likely arouse skepticism as make a sale.

The price is not actually low unless quality is maintained. This is not the secret but the main key to profitable manufacturing and merchandising of rayon goods in 1933. Organizations that go in for quality do not make a secret of it. They do everything possible to gain a reputation for it throughout the trade and then to guard that reputation by fact. Such mills will make a profit in 1933, as they did in 1932. It is a particularly favorable fact that such mills represent the majority of the rayon weaving industry, and a greater majority now than ever before.

1932 A. S. T. M. Proceedings.

The 1932 Proceedings of the American Society for Testing Materials, with headquarters at 1315 Spruce Street, Philadelphia, Pa., has been published. As customary, this is issued in two parts; Part I includes the annual report of the many committees; Part II, the technical papers. Together they comprise 1895 pages.

The address of the president, the report of the executive committee, and the reports of standing, research and sectional committees, together with valuable papers appended to reports, are included in Part I which also gives the 85 tentative standards issued or revised in 1932, as well as the many tentative revisions in standards.

The technical papers presented at the annual meeting of the society are included in Part II including the extensive oral and written discussions on the papers. This covers ferrous and non-ferrous metals, and non-metallic materials. Seven papers in the latter group include various aspects of textiles, covering enzyme action in the textile industry, asbestos textiles, structure and properties of the rayons, colorimeter and method employed in the color testing of cotton, and a machine test on the durability of manila rope.

Each part of the Proceedings is available at the following prices; Paper binding, $5.50; cloth, $6.60; half-leather, $7.00. Copies may be secured either direct from the Society or through COTTON'S Book Department.

Odenheimer's Plan for Permanent Unemployment Relief

THE author of this article is best known for his record as a successful textile manufacturer—whose plant has not missed a yearly profit since its formation and during its expansion. His remarks on matters affecting industry, therefore, must be received with careful attention; his proposals, as given in this article, are presented for the consideration and discussion of the industry's executives, as representing Mr. Odenheimer's view. . . . . .

By S. Odenheimer
Pres., Lane Cotton Mills Co.,
New Orleans, La.

UNEMPLOYMENT is the gravest problem before our country today. Twenty-five percent of the entire working population is jobless—thirteen or fourteen million unemployed. Every fourth man you see is without a job, fed by charity in some form or driven to crime to satisfy elemental needs; the other three are afraid they are going to lose their jobs.

The menace to our civilization is of incalculable proportions. A recent magazine article gives many illustrations of how machines have driven men from their jobs. Here are three typical ones: A century ago one man produced 25 tons of pig iron a year; now one man can produce 4,000 tons. Machines recently installed produce 2,600 cigarettes a minute, as compared with the former maximum production of 600. In the manufacture of incandescent lamps one man today does as much in an hour as he did in 9,000 hours in 1914.

Yet production can be balanced with consumption with every man employed by a system as simple as long division.

The Federal Government must be given the power by constitutional amendment, to establish a uniform work-week. It could adjust industry to the economic situation by making the work-week just long enough to absorb the entire working population.

Once this amendment is in effect Congress would create an Hours of Labor Commission, the members of which would be appointed by the President. The law would make it mandatory upon them to announce, one week after appointment, that no employee in any workshop or industry where more than five persons are employed should work more than a certain number of hours a week. Violation of the law would bring imprisonment as well as fine to the employer. Imprisonment in all cases!

The two basic principles of my plan have been accepted by capital and by organized labor.

They were accepted by capital in the endorsement of the Teagle Committee's share-the-work effort; by organized labor in the recent demand at the Cincinnati convention for Congressional action to establish a 30-hour week.

The Teagle plan is doing some good where it is followed, but it is impractical. Obviously, it is better for all the workers to be employed, even at part time, than for only three-fourths of them to be employed, and the other fourth to be a prey to hunger and desperation.

But we need not expect widespread and impressive results from voluntary action. It is impossible to get everybody to do something out of the ordinary by mere appeal. Even if every employer in the country did put the plan into effect for this emergency, they would not continue it after the worst has passed—and we face a future of reduced employment.

Mr. Odenheimer.

I make the proposal as a practical manufacturer who in 46 years has built up a cotton-spinning industry from 3,200 spindles to more than 50,000, and who has never failed to make a profit, even during the appalling months since 1929.

I do not make it as a dreamer or a theorist. I make it as one who all his life has been opposed to Governmental meddling in business. I make it because I realize that tremendous changes have come over our social system, due to the development of machinery; and that the methods and ideas that met conditions in the past cannot meet those of today and of the future.

In this airplane age, we cannot get anywhere with the economics of the ox-cart age.

The inflexibility of the American Federation of Labor's plan is its weakness. Maybe 30-hour week would not meet the situation today. Then the relief would fail. Certainly, it would not meet the crisis of some future day, and then the Federation would have the whole battle to fight over again. A flexible plan, however, will provide for all time.

It may be objected that the Constitutional-amendment route is a difficult and slow road. But under

the emergency of the unemployment menace, it could be put through in 60 days.

Mental Outlook Would Change Attitude.

If the plan were put into effect tomorrow, the Hours-of-Labor Commission could promulgate its work-week within a week. We know the conditions; the investigations have already been made. We know the unemployment, and the condition of industry and business in all lines.

If, after a short time, it was found that the work-hours were too short or too long, the commission could change them overnight. It would be a permanent body, keeping in touch with employment conditions all the time, dedicated to keeping jobs before the entire working population.

If this system went into effect tomorrow, all employers would be justified in immediately increasing wages by at least 10 per cent. A little later, they might increase wages 25 per cent or even more, as conditions became stabilized. I believe we would see a steady advance in wages.

Manufacturers do not object to paying high wages. They only object to paying higher wages than their competitors, because that runs them out of business. If the earnings of labor were stabilized by steady employment labor would be benefited, and capital, too.

Wages would go up because the mental outlook of our people would be changed. Everybody would have confidence in the future. Those who are employed today are fearful of losing their jobs tomorrow, because of the awful competition of the breadless, who will undercut as they have been undercut. Half a loaf is better than no bread at all.

Those who are hoarding today out of fear would be encouraged to spend. Even if wages were no higher than they are today, the people would be relieved of the burden of feeding, through taxes and private gifts, the unemployed.

Compulsory fixing of the hours of labor so everybody can have work; imprisonment of the employer who violates the law; flexibility to meet changing conditions; a higher scale of pay now and ultimately a larger income to all—that is my plan for permanent unemployment relief.

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Editor's Note.—The above article is reprinted from the Atlanta Sunday American, through the courtesy of the Hearst Newspapers.

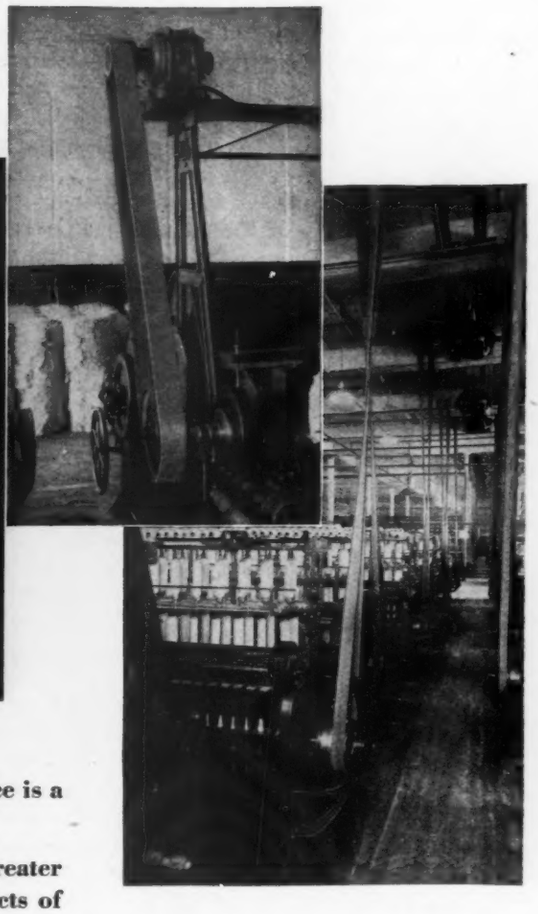
Michael Welsh Discusses Regulation of Industry and Unemployment Relief

MICHAEL WELSH is the pen name of a mill man who is a regular contributor to our columns, and who prepared the following comment on regulation of industrial operation and unemployment relief in conjunction with his excellent article on page 30. This discussion was separated from that article for use following the above discussion of similar subjects by Mr. Odenheimer, which Mr. Welsh had not seen at the time of writing the following article . . . . . .

THE cost of government and the resultant taxes are stifling industry. That statement has been made so many times that it has become trite. There is no desire to deny that government expense and extravagance are making economic recovery most difficult, but, to the writer, that phase of our dilemma is not the most serious. After all the citizens of this nation permitted by acquiescence the rampant development of our present deplorable system of governmental extravagance and waste. It was within the power of the people through their representatives to have controlled the expenditures of the government and the people still have the power to regulate governmental activities and expenditures. Of course, it is true that the bond obligations of our various governments are hanging like millstones around our necks; but although imposing taxes to satisfy these obligations will make the going rough, the load will prove tolerable provided current and future public expenditures are pared to the point that they are consistent with public service rendered and actually needed; and provided our nation is capable of developing some practical system of economic regulation and control.

We can blame our present economic situation on whatsoever we choose, but we cannot get around the fact that unemployment stands out as the real immediate fly in the ointment. Countless articles have been written on unemployment, and numerous conditions and situations have been stipulated as causes for its great prevalence; but it is the opinion of the writer that no definite practical plan for its future control has been presented. New names are now being given to old thread-bare threats of what improved machinery will do to us. Aside from comparative brief adjustment periods of the past and our deplorable war experiences improved machinery has not been a hindrance to the welfare of man. On the other hand it has brought him manifold blessings. Improved machinery need not now nor in the future be other than a beneficient servant of the people, provided the people are capable of developing intelligent methods and systems of controlling and regulating the machinery. Too much attention is being paid to such things as unemployment insurance, doles and what-have-you in the line of paying a man when he is out of employment, and too little attention is being given by practical people to that vital problem of finding a method of preventing unemployment. The finding of such a method is the real challenge to which our nation must respond. Although cutting taxes and reducing other costs are very important to individual mills, and each should strive

GOODYEAR'S SUCCESS comes from "Knowing How"



THE success of Goodyear Belts and Hose for textile service is a matter of mill-proved records.

They are able to do better, last longer and operate with greater economy and freedom from trouble because they are products of actual experience with textile mill duty and requirements.

Goodyear COMPASS (Cord) Endless Belt, for instance, is the most nearly stretchless belt made. *Truly endless, made of cords laid side by side, bound with Goodyear rubber, and enclosed in a fabric envelope that is double on the pulley side.* The cord carries the tensions; the cover takes the wear, making an extraordinarily serviceable belt for individual motor drives on Vertical Openers, Pickers, Tappers and Twisters.

For service on Cards, Frames, Slubbers, Spoolers, Looms, Slashers and Breakers there are other specially designed and constructed Goodyear Transmission Belts (such as THOR, seamless), and for clean-up use the famous long-lived Goodyear Air Hose.

All Goodyear Mechanical Rubber Goods for the textile industry are specified to your particular mill operations by the G. T. M. — Goodyear Technical Man. He will call promptly in response to a line from you to Goodyear, Akron, Ohio, or Los Angeles, California, or your nearest Goodyear Mechanical Rubber Goods Distributor.

Goodyear is represented in the South by authorized Goodyear Mechanical Rubber Goods Distributors conveniently located with relation to your mills and able to supply promptly all Goodyear Mechanical Rubber Goods for the textile industry

THE GREATEST NAME IN RUBBER

GOODYEAR

TEXTILE BELTING

to its utmost to accomplish as much as possible; yet such accomplishments, as beneficial as they might be during normal times, would be valueless if our capitalistic system were repudiated. It is also wise not to forget that in accomplishing much needed reduction in taxes and in the paring down of operating costs, chances are that more people will be added to the ranks of the unemployed.

If the depression has taught us anything it has taught us that we must be interdependent. Progressive mills having humane wage scales, working schedules consistent with the times, and other policies conducive to good economics can quickly be forced by other mills into losses or a departure from their sane policies. It is true that mills which constantly render the entire industry unstable, eventually run into business difficulties, and fall, in accordance with the theory of the survival of the fittest; but few such mills remain closed.

Trade associations may formulate the best possible plans for operating policies and schedules but they cannot enforce them, not even upon their members. To place the necessary regulation of the textile industry in the hands of our customary legislative bodies would be unwise for several reasons. In the first place the average politician is not familiar enough with such practical matters to be able to consider them competently. Then too a plan for the proper regulation of such things as hours of operation, etc., should be amenable to changing conditions whenever the changes are sufficient to justify adjustment. This would not be possible if dependent upon action by our legislative bodies. The writer has a feeling that something else is needed in our national make-up. He does not feel kindly toward several dictator proposals he has heard. We certainly do not want to put such powers in the hands of one man regardless of who he is. Such a principle is diametrically opposed to democracy, and would, in this nation at least, eventually lead to real disaster.

The writer can conceive of a regulating body for each of our major industries. The regulating body for the textile industry should not be composed of politicians and radicals but of capable textile manufacturers elected by the members of the textile industry itself and probably members selected by other related groups. This body should have legal power of regulating industry in so far as such regulation would serve to stabilize the industry, prevent heedless over-production and unemployment. It should by all means have the power to issue licenses for manufacturing, and to repudiate the licenses of those not conforming with the regulations. This feature of the plan is not inconsistent with the present powers of at least some medical and legal organizations. There is no reason why a person must follow the ethics of his profession in practicing law or medicine, when he can get by with anything while operating a mill.

A right of appeal from decisions of the regulating body to another composed of representatives of each of the major industries, and from that body to the Supreme Court of the United States would probably be essential.

A plan such as this one has plenty of flaws. It is liable of being picked to pieces. Using past experience and precedent as a basis of judging it may be declared radical or unsound. This, however, is known—something different must be done to regulate industry in the United States, for only through a definite plan of regulation can the unemployment problem be solved. Yes, let's cut government expenditures and thereby reduce taxes by making our position emphatically known to our lawmakers. Let's put our mills in first class condition and be ready to make profits, let's do our utmost to stabilize our own employment, but let's not stop there. Let's not expect our employment problem to solve itself. Let's not permit ourselves to believe that somebody can wave a magic wand and dispose of surplus productions for which there are no purchasing demands. Let's not get the idea that we can prosper while all others suffer. In order for individuals, cotton mills, the textile and other industries to be able truly to build for profit they must all work to bring about some sane, democratic system of regulating those things which are responsible for economic and social situations in order to make such destructive conditions as unemployment impossible. Our democracy is assuredly challenged and we cannot, we must not rely upon professional politicians to answer the challenge.

Bemberg Reports Increase in Shipments of Yarn in 1932.

An increase of 20 per cent in shipment of Bemberg yarns during 1932 as compared with 1931 was reported by S. R. Fuller, President, American Bemberg Corporation, 261 5th Avenue, New York City. Mr. Fuller said in part:

"During the past year synthetic yarns were brought into volume competition with natural fibers on the basis of quality rather than on the basis of price exclusively. The upward trend in demand for novelty rough weaves calling for pure dye fabrics has afforded unusual opportunity for profitable promotion of high quality synthetic fabrics. This trend is reflected in the marked success of all-Bemberg and Bemberg mixtures in sand crepes, novelty heavy sheers and matelasse type fabrics constructed of 100 and finer deniers.

"Many fabrics created of synthetic fibers and synthetic fiber mixtures stand entirely on their own individual merits both from style and quality points of view in the various price ranges. Uncertainty regarding silk prices has further contributed to the interest of fabric houses in the profit possibilities of quality synthetic. In connection with this development, Bemberg has taken its logical place in accordance with an established policy of producing a quality yarn competing primarily on the basis of quality and secondarily on price.

"The favor accorded synthetic yarns in Paris and by leading American fabric houses and cutters-up provides unprecedented opportunity for 1933. In our opinion, high quality synthetic will continue attractive to fabric manufacturers regardless of falling off of demand for novelty weaves.

"It is interesting to note also that definite progress has been made in the underwear and hosiery fields, where new developments in the manufacture of the yarn have widened the scope and increased the use of Bemberg, particularly in the warp knit industry."

This MILL SUPERINTENDENT WANTED TO SAVE 60% ON ROLL COST

but...

HE THOUGHT THERE WAS A CATCH IN IT!

...so we put it up to you this way:

Suppose you named a few mills you could trust to investigate Armstrong's Seamless Cork Cots. You'd choose mills that run the numbers you spin—mills operated by men whose knowledge and judgment you respect.*

Then suppose these men reported that Armstrong's Seamless Cork Cots actually *saved* 60% *on roll covering costs.* That the quality of the yarn spun was equal or better. That spinning conditions were improved—clearer waste decreased, trouble with hard ends reduced. And that humidity conditions have less effect on cork rolls. Would you accept these facts from these men?

That's just what *has* happened. Right this minute more than 200 mills are using Armstrong's Seamless Cork Cots—mills whose judgment you respect. Over six million spindles have been put on Armstrong's in the last five years—and the number is growing as fast as replacements permit.

You can't afford to ignore these facts. If you challenge the savings, why not settle the question with test frames in your own mill? Then decide on the facts *you* have proved for *yourself.* That's fair enough, isn't it?

Armstrong's (A) Product

*In our files we have data from mills spinning all types of yarn with Armstrong's Seamless Cork Cots. On request we will give you the experience of mills spinning yarns similar to your own.

Armstrong's
SEAMLESS CORK COTS

For Spinning and Card Room Rolls

Armstrong Cork & Insulation Co.
923 Arch Street, Lancaster, Penna.

I would like to know how I can prove these savings in my mill. Please send me without obligation your book, "The Facts about Armstrong's Seamless Cork Cots."

Name.....

Firm Name.....

City..... State.....

CURRENT TEXTILE TOPICS. . . .

Talk of the Month

IN the slow process of emerging from the maladjustments of depression, the cotton goods industry and textiles generally have begun the year uncertainly not by reason of their own fault but because of outside conditions. There are two notable circumstances for the cotton industry in the recent past. One is that textiles generally have led the first real surge among the industries, suggesting a turn from the low point of depression. The other, as we see it, is that such a surge has been made with production in cotton mills and other textile plants regulated closely to demand so that at the beginning of 1933, in spite of the relatively great expansion, the supply and demand conditions were favorable to a quick resumption of wide activity.

The General Situation in Textile Markets

Thus we say that outside and not internal conditions were responsible for a hesitation in cotton goods sale and manufacture to start the month now ended. The big question for all economic branches is what will be the way out of maladjustment. The greatest stumbling block to the cotton industry early in the year, of course, was legislative action at Washington. That was one of the outside factors creating uncertainty but, like the so-called sentimental influences in business, the forces on the outside are none the less vital within. And so the business in cotton goods was checked in the month of January when by all the tokens from within a new movement reminiscent of last fall, with the added prospect of profits, should have got under way.

Now as to the way out, the cotton industry may find an object lesson from recent experience. If production was regulated through the last half of 1932, the movement for co-operative effort toward permanent reduction of night work received no confirmation late in the year and the outlook is dubious for healthy operation in the future. The mooted "Technocracy" here comes into the picture for cotton manufacturers. The distresses of recent years have led to much discussion of new ways for old and the ability of private enterprise to handle machinery to the best advantage all round is challenged by advocates of some radical new control entailed in the method referred to.

For the outside observer, nothing assuring in the way of what the new control would do for everybody has come forth. But if we are skeptical of proposals for a distinct departure from the past, we are not blind to the fact that economic progress and readjustments have been made; so, it follows as night the day that the evolution will continue. Industry has run into a snag and it faces a permanent problem of regulation, whatever one may think of the way out of technological unemployment or of the proposed plans under the mystic name technocracy, which many consider "technocrazy." Some way for temporary recovery of business might be found, but if it is only a balance for the depression, it will not serve.

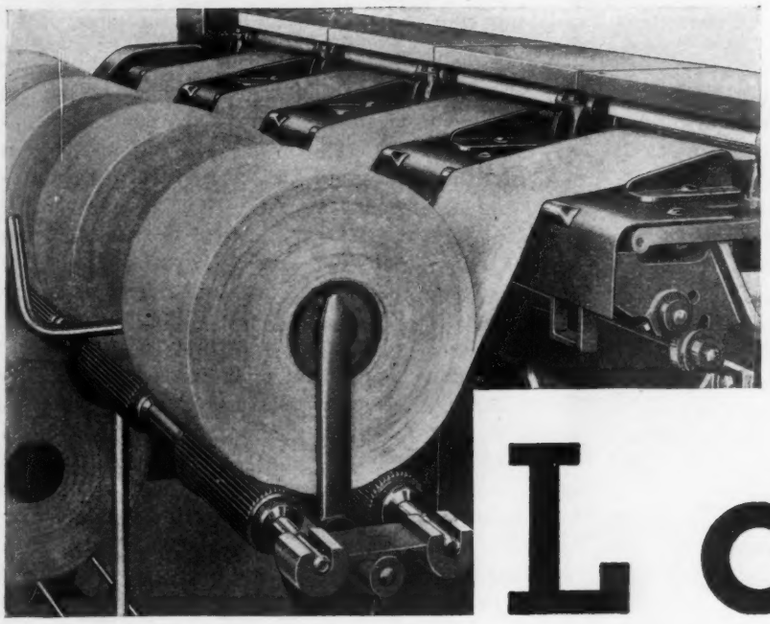
It may be that the oldest and most experienced of the mechanical industries—the textiles in general, of which cotton manufacture is approximately 80 per cent—can give the answer to whether business men can continue to hold the reins, or whether they must be handed over to some "super-engineering" group. When "most experienced" is stated, it means also in the adversities and penalties of over-production. That the textile industry relatively has reached a better point of employment than others is not due to efforts aroused only by the disarrangements from the depression, but efforts thus date back to eight or ten years ago, since which time there has been little encouragement for this industry.

New industries of the 20th century, which are many and important, did not go through the same experience as textiles of the beginnings of mechanical production when the problem was chiefly to find ways constantly of increasing output. When this program overreached, because distribution had not kept pace, textiles had a double problem. This explains why it suffered through the 20's while other industries were prospering. It may also have given textiles a lead also in ascertaining the way to run economically and reasonably, the next thing being to secure full co-operation in this schedule. In that, textiles would show the way for private enterprise in general to perpetuate itself. The change is inevitable. A voluntary adoption of it would be most economical and satisfactory.

Talk in the market for cotton goods around mid-January was largely centered on the prospects as affected by legislative action toward remedy of the farmers' distress. Fundamentally, the market was firm and profit possibilities were more promising. The stability of cotton augured relief from the depreciation of inventories, which for years had interfered to otherwise possible mill profits. The consumer need of goods remains large. The year's results, therefore, depend upon the course of raw material, balance of production to demand and the readjustments which may be made in general business.

Among the developments of the year recently closed, a healthy report is made by the General Arbitration Council of the Textile Industry. That organization reports a sharp increase, 23 against 8 the previous year, in cases handled. A number of adjustments were also effected by informal negotiations. In most cases, it is added, awards were willingly accepted and followed in large part by friendly resumption of business relations by the parties involved. George A. Sloan is chairman of the Council.

Competition among finishers of cotton goods brought prices to the lowest level on record early this year. It was believed, however, that the price situa-



Modern Drawing using

Laps

results in stronger yarn!

By drawing from laps, rather than from individual ends of card sliver, this new process produces sliver that results in stronger, more uniform yarn with far less end breakage during roving and spinning.

Breakage and piecing are eliminated

In this process, there is no breakage. This eliminates the many variations due to stopping and piecing in ordinary drawing, and the improvement in sliver is remarkable. Using the same card sliver, a comparative test (by a mill) was made. Sixty 1-yard samples of sliver produced by regular drawing showed a variation of 11.5% in weight, while sixty samples of Controlled-draft sliver varied only 6.5%, showing 43% greater uniformity.

Greater strength, less end breakage

The two test lots of roving were made into 30s yarn by identical processes. The breaking strength of the yarn from the Controlled-draft drawing was 5.9% greater, while the ends down were 64.75% less. Investigate MODERN drawing!

SACO-LOWELL Controlled-draft Drawing

SACO-LOWELL SHOPS

147 MILK STREET, BOSTON, MASSACHUSETTS

CHARLOTTE, N. C. SPARTANBURG, S. C.

ATLANTA, GA.

tion had reached a crux and that the long downward swing had culminated in a basis that would not last long. The large factors were driven to drastic action to protect their outlets, and it was figured that their move would bring an end to price cutting.

Improved Conditions.

ACCORDING to a recent report of The Cotton Textile Merchants Association of New York, during the year 1932 the production of carded cotton cloth amounted to 2,727,000,000 yards as compared with 2,784,000,000 yards of the same fabrics in 1931.

The sales during the year were 102.5 per cent of production.

At the end of 1932 stocks of goods on hand were 220,000,000 yards as compared with 290,248,000 at the end of 1931. Unfilled orders were 365,000,000 yards as compared with 322,039,000 the first of the year.

From these figures it would seem that the production of carded goods was approximately 80 per cent of that during 1928-1929.

It would be very interesting to know how many other major industries have passed through the depression so far with such a small amount of curtailment.

This report also indicates that stocks of goods during the last two years have been reduced by approximately 140,000,000 yards.

It is needless to refer to the fact that during the last few years spindles in place have been reduced by between six and seven million.

With reduced inventories, with a greater knowledge of cost accounting, with a better knowledge of marketing conditions and with strong co-operative factors manifest in the industry, the new year should have at least a slight degree of hope. A word of caution should be injected, however, because every depression carries with it certain changes that are often perplexing in their adaptation, while textiles is easily recognized as one of the fundamental necessities of life. It is also recognized that it is not irresistible to change.

Those manufacturers who have been connected with the textile industry for the last twenty years can easily recall very drastic changes that have arisen in manufacturing and marketing.

New England Night Operation

A RECENT issue of *Fibre and Fabric* indicates that night operations are increasing in New England. A news item states:

"A number of departments in various mills in Lawrence, Mass., are working day and night, including the Wood, Ayer, Arlington and Pacific mills. The Washington Mill, which shut down early last Spring is still employing a small number of employees in some departments, while the bulk of former Washington Mill help has been absorbed by the Wood and Ayer plants.

"Between 5,000 and 7,000 employees are on the pay roll of the Wood Mills, with the plant running practically twenty-four hours a day in some parts. The French spinning department is still operating on a very small scale, while the Bradford system is running day and night. The Ayer Mill weaving department is still experiencing the spurt which set in some weeks ago. In the Arlington Mill a let-down in the finishing end was noted just before the close of the year."

More Cotton in 1933

IT is a well known fact that too much cotton has been produced in the South for the last several years. It is also a well known fact that many agencies, including the state legislatures, farm organizations, the American Cotton Co-Operative Association and the National Government have realized this fact and have made endeavors to reduce the acreage.

It is also a well known fact that everything that they have done has tended to increase acreage. The Farm Board Act was a great stimulant to increasing cotton acreage and its folly is exemplified by the loss of $360,000,000 of the tax payers' money. The lending of money by the Government to farms to buy seed to increase an over-production crop proves to be disastrous. Other measures could be mentioned, but the chief reason for saying that more cotton will likely be raised in 1933 is the fact that the Government has again decided to help the farmer, not only by lending him money to buy seed, but by a theoretical and impractical piece of legislation known as the Voluntary Domestic Allotment Plan.

This plan raises the hope of the farmer, in that it promises him an abnormal price for his cotton on the condition that he reduce his acreage 20 per cent or more.

Some time ago, in one of our southern states, a plan was entered into whereby certain emoluments would result from acreage reduction. A story is told of a farmer who had planted sixty acres the year before and he agreed to cut his crop to forty acres. However, his sixteen year old son planted twenty acres, his eighteen year old daughter planted ten acres and his wife planted ten acres. Therefore, the farmer fully complied with the technicality of the agreement, but instead of planting sixty acres as he had the year before, or forty acres as he technically agreed to, the family actually planted eighty acres.

It is reasonable, therefore, to assume that with the flashy promises of the proposed legislation increased acreage will be inevitable.

Cotton Production

THE total world cotton production during the 1932-33 season is now estimated at 24,000,000 bales of 478 pounds which is 200,000 bales less than the estimate released by the Bureau of Agricultural Economics, U. S. Department of Agriculture, on December 8, but 600,000 bales more than the November estimate. The 200,000 bale decrease since December 8, was brought about by a reduction in the estimate of the Indian crop, says the bureau.

The world figure of 24,000,000 bales is still 3,500,000 bales less than the estimate of the 1931-32 crop and is the smallest since 1927-28. It is 2,100,000 bales less than the five-year average production from 1927-28 to 1931-32, about 1,100,000 bales less than the five-year average disappearance during 1931-32.

• PROGRESS DEMANDS RECOGNITION •

LEAN YEARS ARE DEVELOPMENT YEARS

NEW • NEW • NEW • NEW • NEW • NEW

1. BUCKLEY OPENER UNITS . . . . . .
2. 30″ CYLINDER CLEANING UNITS. . . . . .
3. CONVEYORS . . . . . .
4. NEW MODEL FEEDER . . . . . .
5. ONE PROCESS PICKER . . . . . .
6. PATENTED VARIABLE SPEED CALENDER . . . .
7. AUTOMATIC SELF-DOFFING CALENDER . . . .
8. NEW MODEL DRAWING FRAME WITH ELECTRICAL OR MECHANICAL STOP MOTION. .
9. HIGH DRAFT SPINNING . . . . . .
10. LARGE PACKAGE SPINNING . . . . . .
11. NEW MODEL SPINNING FRAME. . . . . .
12. NEW MODEL TWISTER . . . . . .
13. REVERSIBLE TAPE DRIVE WITH PATENTED TENSION DEVICE . . . . . .
14. LARGE RING, HIGH SPEED TWISTERS . . . . . .

• • •

These and Other Improvements
Recently Developed by

H & B AMERICAN MACHINE CO.

PAWTUCKET, RHODE ISLAND

BOSTON OFFICE
161 Devonshire Street

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COTTON PREPARATORY AND SPINNING MACHINERY

The estimate of foreign production now stands at about 11,300,000 bales, which is 900,000 bales less than in 1931-32, but about 600,000 bales less than in 1930-31.

New England Mill Situation

COTTON textiles moved only moderately from a New England standpoint the first weeks of the year, though an increased demand was reported for the finer lines and somewhat better business for the tire-fabric mills. The tire-fabric gain was a logical concomitant of the active season for the automobile manufacturers, starting their new year of business. What cotton mill men were hoping for was the opening up of demand on a strong price basis. The mills here followed the upward tendency of the cotton industry as a whole in the fall, but likewise failed to make profits. This was a sound beginning toward renewed prosperity and the trade is anxious for broad business betterment to help build upon such a foundation.

Beyond the fundamentals of the industry, New England has suffered the hesitation of the rest of the country incident to Congressional dealing with the farmer problem. The Massachusetts mills also are concerned with a State legislative proposal heretofore mentioned but becoming more serious. As it is a proposal that forecasts similar effort in other States, if successful here, action taken in Massachusetts with regard to unemployment insurance may well be watched outside. Industrial leaders are striving to circumvent the passage of a law by soliciting support of the public and workers against the plan.

Massachusetts has lost in the last ten years or so not far from half of its cotton spindleage, thereby yielding supremacy among the states in the industry. That obviously has reduced the employment offered by the mills and added burden to employers would no doubt increase the loss of positions for operatives. Incidentally, Governor Ely in his inaugural reiterated his stand for a temporary suspension of the 48-hour law, in which the state stands alone, so that Massachusetts could stem the tide of loss of textile mills by giving them a position more equitable with that of other units in the industry both in New England and elsewhere.

This labor matter is being agitated more and more, but with the general note one of shortening work hours. For example, Governor Winant of New Hampshire, also in an inaugural address, recommended a bill to shorten the weekly schedule for work in the State. Governor Ely also is working with the aim of shorter hours as his ultimate goal, but meantime he recognizes the need of temporary relief for Massachusetts mills from its advanced position. Thus he was consistent in the call that he made early in January for a conference of state labor commissioners and officials of eastern states to consider ways and means for establishing uniform labor laws.

Meantime it is well to remember that textiles still lead in New England industries and in Massachusetts manufacture. In this connection, the First National Bank of Boston had an encouraging note at the end of 1932 on the general situation: "From the low point in July to October of this year, our index of New England industrial activity showed an increase of approximately 20 per cent, while employment increased by 23 per cent, and payrolls by 29 per cent during this period. Since that time there has been more than the usual seasonal decline in manufacturing operations of the New England states, although the present rate of activity is still well above the low point of the summer months. The revival in business that occurred during the year not only in this country but quite generally throughout the world, although of short duration, is an encouraging indication of the vitality of our economic system in that it reveals inherent strength and flexibility in the face of tremendous odds."

Two refreshing bits of textile mill news, in the midst of a situation not yet too assuring, have come out of New Hampshire. The Otis-Columbian Mills, of Greenville, cotton goods, started 1933 with announcement of a 15 per cent increase of wages for its 300 employees. Last August the plant was on the point of closing and the workers accepted a cut of 35 per cent. However, they were allowed to occupy corporation houses rent free. With the increase, rents are restored, but 25 per cent under normal. The plant is working day and night on orders far ahead and other wage increases are suggested.

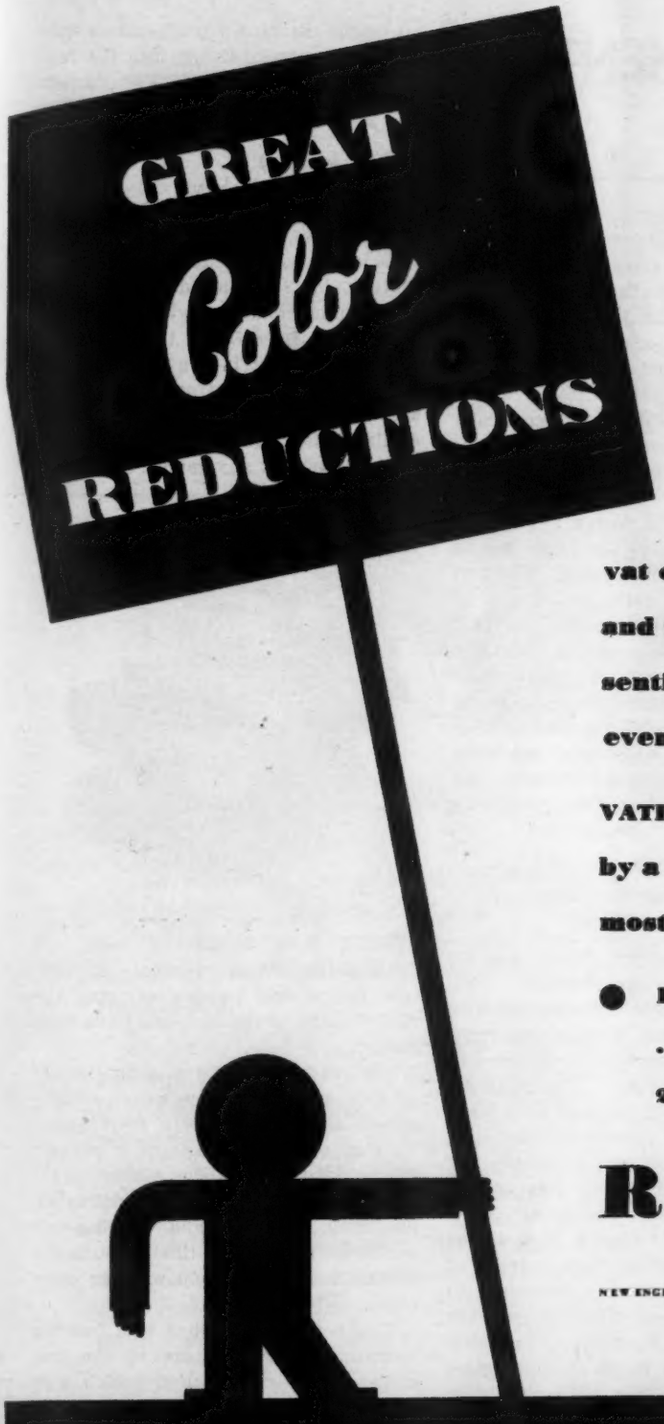
Employees of the Gonic Manufacturing Company, Rochester, N. H., worsteds, recently unveiled a tablet to "humanity in business", in honor of their employers. The Rindge and Meader families of Massachusetts have been identified in the management for more than 50 years. No strikes have been invoked and cordiality has ruled the whole half a century. A voluntary increase of ten per cent in wages was made late in 1932 and at Christmas time each worker was remembered with a gift, the plant employing 300. The mill operated at capacity last year.

Cotton Bags.

Successful experimental use of cotton bags for retail put-ups of onions last year has resulted in their more general adoption for this purpose by one of the largest commission houses in the New York wholesale produce market. This firm, according to the New Uses Section of the Cotton-Textile Institute, first tried out 100,000 bags of the 10-, 15- and 25-pound sizes. Later, 300,000 bags were used, and during the present season the firm has to date required more than 1,000,000 cotton bags, for the packing of onions in the popular retail sales units.

One of its customers, a large chain organization, gave a trial order this season for 25 carloads of onions put up in open mesh cotton bags of various sizes. The chain store managers were directed to call the special attention of housewives to the cotton bags and to emphasize their reuse possibilities as dish-cloths, mop pads, or dusting cloths. Speedy sale of the onions led to a repeat order for a larger quantity packaged in cotton. Fifty-two railroad carloads of onions were thus disposed of within a few days.

This use of cotton bags follows similar successful experience in the retail packaging of potatoes and oranges. Millions of cotton sacks are now used annually by the potato shippers of Idaho, Maine, Long Island and other important producing centers. Adoption of cotton sacks for oranges is another recent development offering a market of about the same proportions as that created by the packaging of potatoes in cotton bags.



"GREAT!" . . says every dyer who has turned to VATROLITE for stripping!

VATROLITE is a reducing agent for vat colors . . a Sodium Hydrosulphite named and timed to modern uses . . a dye-house essential, in point of purity, strength, and the even balance of chemical properties.

VATROLITE is *uniformly* correct! . . as attested by a rapidly mounting volume directed to the most exacting dyers.

- Immediate shipments in any desired quantity . . in safe, convenient packings of 50, 100 and 250 lb. capacity.

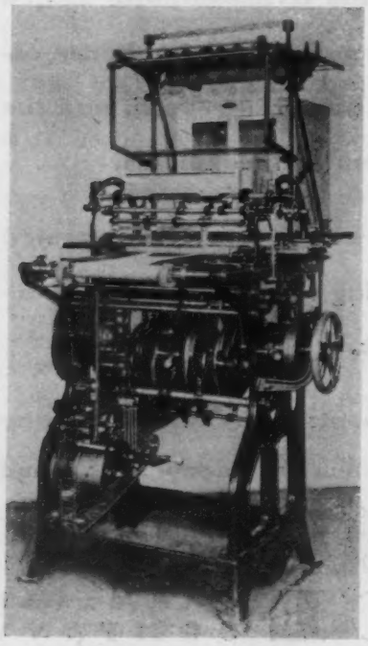
ROYCE CHEMICAL COMPANY
Manufacturing Chemists
CARLTON HILL · NEW JERSEY
NEW ENGLAND REPRESENTATIVES: RICHARD HAWORTH, Inc., 25 FOUNTAIN STREET, PROVIDENCE, R. I.

VATROLITE
SODIUM HYDROSULPHITE
REG U.S. PAT. OFF.

NEW TEXTILE EQUIPMENT AND PUBLICATIONS . . .

Single-Head Full-Fashioned Hosiery Machine.

Wildman Manufacturing Company, Norristown, Pa., have introduced a new development in full-fashioned knitting—the Wildman single-head full-fashioned hosiery machine, illustrated herewith, which, it is pointed out, makes exactly the same hosiery as the regular full-fashioned machine. The legs are knitted on one machine and the feet on another. The machine has been in successful operation for more than a year in the company's experimental



Wildman single-head machine.

mill, making ladies' hosiery, half-hose and children's striped hosiery.

The most obvious point in connection with the single-head machine is of course its flexibility, to meet fluctuations in business volume, style, etc. In addition there are the features of speed, ease of operation, etc., the manufacturers point out.

Except for turning the welt and racking back, the machine is automatic. The operator hooks the welt bar in the first course of knitting and turns on the power. The machine stops when the welt is knitted; after which, the leg is completed automatically.

The picot attachment automatically goes out of action after the picot is made. Any number of picot courses can be knitted.

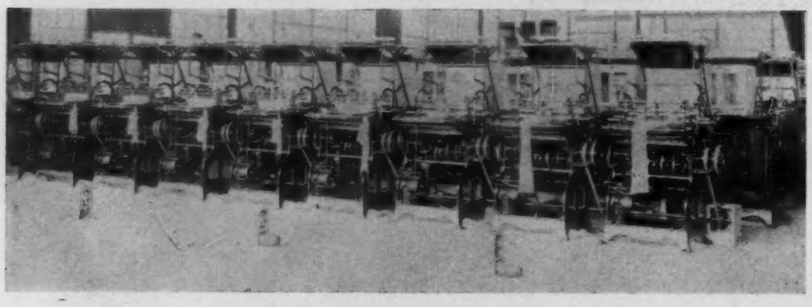
In operating the footer the knitter transfers the legs to the footer needle bar and starts the machine. The foot is completed automatically.

The manufacturers point out that the machines can be put in operation within a few hours; that girls with no knitting experience can learn to operate them successfully in two to three weeks; that the single-head machines can be moved easily and cheaply; and that special building construction is not necessary for housing them.

:: :: ::

Condor Cone Belt Available in 16 Standard Sizes.

Manhattan Rubber Manufacturing Division, Raybestos-Manhattan, Inc., Passaic, N. J., announce major improvements in the new Condor whipcord cone belt for increasing its service life four to eight times. The strength member of the belt consists of a layer of closely spaced, pre-treated whipcord, wound continuously and completely imbedded in rubber which has special heat-absorbing and dissipating qualities. Low inelastic stretch, high degree of bending flexibility, wide margin of tensile strength, effective resistance to distortion and wear from shifters, are claimed by the Manhattan engineers. The belt is made in 16 standard sizes to provide a belt that will correctly fit all cone drives without change in the pulley set-up. The company states that more than a year was spent consulting all textile machine manufacturers with a view to standardizing, into the fewest possible number, the various odd sizes of cone belts.



A battery of single-head full-fashioned hosiery machines.

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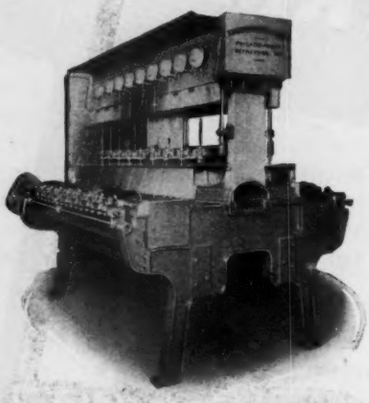
New Rayon Pot Spinning Machine.

H. W. Butterworth & Sons Co., Philadelphia, Pa., manufacturers of textile finishing machinery for more than a century, have developed a new rayon pot spinning machine with a traverse action five times faster than was previously available, it is announced. The speeding up of the traverse action is accomplished by a special design of caming which eliminates all crank motors and torque; any number of strokes,



Rayon pot spinner.

from 15 to 100, is possible. Application for several patents covering the new feature of the machine have been filed.

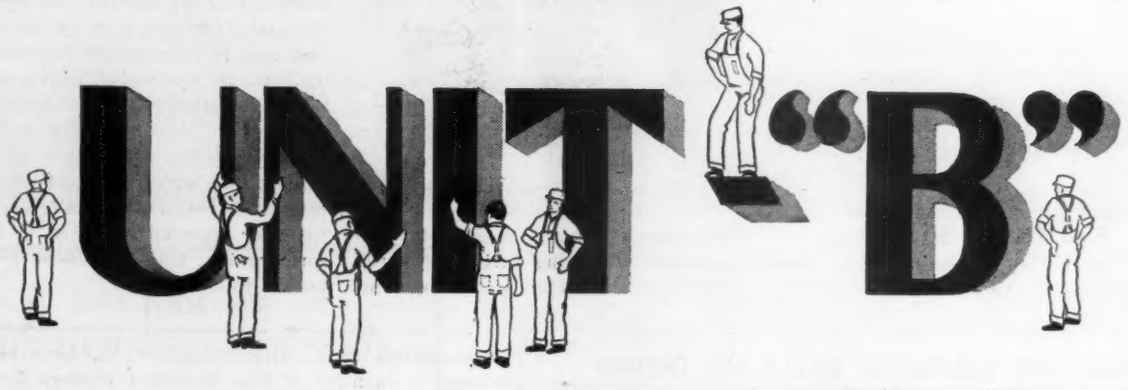
The traverse stroke can also be set to give an open basket weave of any weave desired, such as a helix angle. This in turn, it is explained, permits faster treatment of the rayon cake—such as acid-working, de-sulphuring, bleaching, scouring and soaping—resulting in a saving of time through the elimination of the skein winding operation.

The new machine has ball bearing mountings. One feature of the machine is the construction which permits the Godet wheel to be removed and replaced while the machine is in operation. The Godet wheel is self-centering. The pumps are for heavy duty, and have either three or five pistons. Pump shafts are arranged so that the chemist may have any change of speed required. All pumps are made of a metal having a special alloy for long life. There are nine pumps on each side of a section. Motors are high speed type.

In addition to the new spinning machine Butterworth will make bobbin spinning machines, Xanthaters, mixers, presses, washing and drying units, pumps, pump brackets, and all miscel-

THE BEDAUX PRINCIPLE DEALS WITH THE HUMAN ELEMENT ALONE

Building for Profits



The time has come for building—building up better methods, better policies, better attitudes and practices—so that the future of your plant will be placed on a firm foundation.

Property and equipment are important, but the biggest thing in building for profits is the human element. Improve the human attitude and utilize all of the lost motion and energy and you will automatically reduce your production costs.

Unit "B," which means the Bedaux Principle of Labor Measurement, is more valuable today in building for future profits than ever before—and already over 300 mills, involving over 250,000 workers, have profited by Unit "B". These manufacturers have saved over $80,000,000 in manufacturing costs and at the same time increased wages of employees over $45,000,000.

The adaptation of Unit "B" in your mill requires no plant alterations or changes of equipment. Its cost is negligible compared to the results obtained.

The whole story of Unit "B" and why it is one of the most important adjuncts in Building for Profits is contained in an interesting booklet "Bedaux Measures Labor" which will be sent to any textile mill management upon request.

The Charles E. BEDAUX Company

OF NEW YORK, INC.

DOUGLAS S. KEOGH Pres. — *H. B. CRAFT, Vice Pres.*
J. J. SKELLY, Gen. Mgr. — *in charge of Sou. Operations*
22 E. 40th St. — *30 Camden Road*
New York — *Atlanta, Georgia*

THE BEDAUX PRINCIPLE DEALS WITH THE HUMAN ELEMENT ALONE

laneous equipment for both pot and bobbin type machines.

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New Radio-Active Chemicals For Treating Fire Hose.

Special chemicals with radio-active properties are now being used for treating fire hose for rendering it mildew-proof and moisture repellent, by The Manhattan Rubber Mfg. Division, Raybestos-Manhattan, Passaic, N. J. The treatment consists of the introduction of certain salts of rare earth metals into the fabric of the hose. These salts are radio-active and permanently prevent the formation or growth of mildew colonies, it is explained, and, in addition, render the hose fabric rot-proof and moisture repellent for its life. The new treated fire hose is furnished in 2½-inch double jacket size in Condex, Fultex and Vitex grades.

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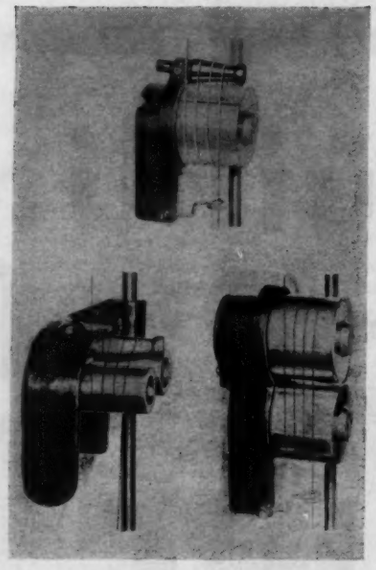
Atwood Announces Variety of Feed Rolls for 5B Machine.

Several types of feed rolls have been developed by the Atwood Machine Co., Stonington, Conn., to provide for the large and increasing variety of yarns handled on the 5B spinner. Large single rolls and small double rolls, illustrated herewith, are equipped with the new Atwood lap proof separator, an adjustable roller bearing device for eliminating roller laps. Thread separators of hardened steel or of smooth or grooved porcelains in various shapes and sizes are also available. Also, the large double feed rolls shown, require no separator because the skew of the rolls provides for the separation of threads. Small double feed rolls (skewed) are also available.



New 5B feed rolls.

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Pamphlet on Pulley Lagging.

Rubber pulley lagging increases the coefficient of friction between a rubber belt and a dry pulley face about 20 per cent and is particularly recommended for drive pulleys on belt conveyors and bucket elevators to improve pulley grip and prevent slipping—declares a two-page insert for its mechanical goods catalog just issued by The B. F. Goodrich Rubber Co., Akron, Ohio. Directions for applying are given in the insert, which also discusses elevator bucket washers.

WHAT THE SOUTHERN MILLS ARE DOING..

OPERATIONS have been started in the new unit of the American Net & Twine Co., at Blue Mountain, near Anniston, Ala. The addition represented an expenditure of approximately $55,000.

A Proctor & Schwartz drying machine, an automatic Economy baler, and a dyeing vat have been installed in an addition to the dyehouse of the Avondale Mills, at Sylacauga, Ala., which was recently completed. Three concrete and brick warehouses were also constructed here.

Oakboro Cotton Mills, Oakboro, N. C., have installed a complete unit for water softening. A 6-cylinder, 360-hp. Diesel engine for operating the mill has also been installed.

Charles Mills, Red Springs, N. C., recently installed a high speed warper with creel, and new combers.

Construction work has started on a new plant for the Wilson Finishing Mills, Burlington, N. C.

Central Weaving and Spinning Co., Fayetteville, N. C., have leased the Binz Silk Mill and plan to reopen it.

Athens Manufacturing Co., Athens, Ga., has purchased the buildings, equipment and village of the Southern Manufacturing Co., Athens, which has been closed down for some time.

Pennsylvania Textile Mills, Central Falls, N. C., have been acquired by Spencer Love and associates, or Burlington, and, with new machinery installed, will be operated under the name of the Central Falls Mfg. Co.

Carolina Specialty Company have announced the sale recently of Hermas shearing machines to E. M. Holt Plaid Mills, Burlington, N. C.; Cleveland Cloth Mills, Shelby, N. C.; Burlington Mills Co., Burlington, N. C.; and Aragon-Baldwin Cotton Mills, Chester, S. C.

The Guillet overhauling system has been purchased by Erwin Cotton Mills Co., Durham, N. C., from the Dixie Spindle and Flyer Co., Charlotte, N. C.

Proximity Mfg. Co., Greensboro, N. C., have purchased equipment for increasing their power plant production by 50 per cent.

Adams-Millis Corp., High Point, N. C., have recently purchased a quantity of Sipp-Eastwood winders for their new throwing plant, according to announcement made by Carolina Specialty Co.

Dilling Cotton Mills, Kings Mountain, N. C., recently installed several Sipp-Eastwood horizontal silk warpers, purchased through Carolina Specialty Company.

Albemarle Weaving Co., Charlottesville, Va., have erected a new warehouse. New machinery has been installed in the dyeing department.

Worth Spinning Mills, Stony Point, N. C., have overhauled their spinning frame by the Guillet overhauling system of the Dixie Spindle and Flyer Co., Charlotte, N. C.

The Alabama Mills Company, a cotton mill company with 10 mills throughout Alabama, filed a voluntary petition in bankruptcy recently. The petition was filed by Paul Redmond, president, with Arthur Fite, of Jasper, as attorney. Mr. Redmond made bond in the Federal Court in the sum of $25,000 as receiver. Alabama Mills Company was organized under Delaware laws and authorized to do business under Alabama laws. Principal offices are in Birmingham.

Lowe Mills, Inc., Huntsville, Ala., have been incorporated to take over properties of Lowe Mills, in that city which have been closed several months. A. F. Mullins, Jr., transferred the entire property to the new corporation at request of Donald Comer, president of Avondale Mills, Birmingham, who bought the bankrupt properties at a sale several weeks ago. Donald Comer is president of the new company; John W. Porter, Steele Mills, Rockingham, N. C., vice-president, and Daniel Burk, of New York, secretary-treasurer. The company was organized with $30,000 capital stock in 300 shares, of which Mr. Comer owns 285 shares.

Fort Payne Hosiery Mills, Fort Payne, Ala., manufacturers of 70-gauge silk, rayon and mercerized hose for infants, are in full-time day and night operation. They operate 25 Standard H knitters and Fidelity ribbers, and also have a dye plant.

DO YOU WANT TO—

—*Save on Dyestuffs?*

—*Cut Processing Time?*

—*Improve Processing Results?*

—*Put a Finer Finish on Your Goods?*

—*Get Bigger Profits from Your Output?*

You will find the **ANSWER** *in these New* **Onyx** *Compounds!*

ALIPHATIC ESTER SULPHATE and **GLYCERYL SULPHATES**

THE NEW SERIES!

ALIPHATIC ESTER SULPHATE

Highly effective as a Penetrating and Wetting out agent in the Dyebath: for Kierboil, Finishing, Throwing, Printing and Vat Dyes. So stable, will not break under ANY conditions of use. Resists boiling in organic acids and salts; unaffected by hard or calcerous water. Carries dye into tiniest fibre and produces clear, even-dyed fabric in record time. Effects important savings in amount of dyestuff needed.

OLEO GLYCERYL SULPHATE

Used for Softening, Finishing and Lubricating Silks, Rayon or Mixed Goods in all processes. For Dyeing and Finishing. For Kierboiling; for boiling off Hosiery; for Silk Throwing; as a base for emulsions. In boiling off and kierboiling, will not break under hard or calcerous water. Prevents oil spots. Boil off is more penetrating and cleansing.

STEARO GLYCERYL SULPHATE

Recommended for Softening and Finishing of Cotton, Rayon, Silks, etc. Produces softer feel. Gives a PENETRATED finish, not merely surface. Stable with organic salts and hard water; no danger of breaking. Positively no odor in storage. Beautiful effects obtained.

PALMITO GLYCERYL SULPHATE

Very effective for scouring Wool and Boiling off Cotton and Rayon. Deeply penetrative, removing every trace of Emulsions and oils. Wool becomes fluffier. Even shades assured in dyebath.

ANNOUNCED in December . . . sampled and mill-tested in January . . . by February becoming standard in many leading plants! That's the acceptance of the new ALIPHATIC ESTER SULPHATE and GLYCERYL SULPHATES developed by the Onyx laboratories.

This acceptance is not surprising. *Every* mill wants a way to produce better fabrics at lower cost. The ONYX series . . . *at prices within reach of every mill* . . . provides the answer.

THE ADVANTAGES:

Stability—penetration—concentration—solubility beyond that of any sulphonated aliphatic compound.

Every operation, from throwing to finishing, is performed with greater speed . . . less trouble . . . reduced operating cost . . . and smaller quantities of compound are needed. The finished fabric sets new standards for quality

Dyehouses report unusual savings in dyestuffs and trouble-free production of level, clear shades. Finishers are highly pleased with the finer finish. Each day brings reports of new advantages . . . new savings . . . or new adaptations from mills using one or another of the series.

Send coupon for sample and details.

Make tests in your mill NOW! Don't wait until a competitor's goods arouse your interest. Coupon brings sample, booklet and suggestions for best use. STATE OPERATION AND FABRIC.

ONYX OIL & CHEMICAL CO.
JERSEY CITY, N. J.

Specialists on Finishing Materials

Midwestern Repr. CHAS. E. MAHER, Chicago, Ill.

Mail this coupon

Onyx Oil & Chemical Co.,
15 Exchange Place, Jersey City, N. J.

Gentlemen:

Send sample and directions for_____

_____

_____

Also booklet and prices. No obligation.

C-2

Firm Name_____

Individual_____

Address_____

City_____ State_____

TIMELY NEWS ITEMS WITH A TEXTILE SLANT . . . .

Edwin Howard Represents Veeder-Root, Incorporated.

Edwin Howard, 1401 Woodside Building, Greenville, S. C., has become southern sales manager of Veeder-Root, Incorporated, manufacturers of pick counters and other counting devices for the textile industry. Mr. Howard is widely known throughout the southern textile trade, having been for many years in the past southern agent for the Fales and Jenks Machine Company. The new connection does not interfere with Mr. Howard's present machinery and equipment line.

Edwin Howard.

Mr. Howard is being assisted by Robert W. Bailey, who for several years was associated with J. E. Sirrine & Company and who will constantly cover the southern territory representing Veeder-Root counting devices. The entire sales activity in the South will be under the direct charge of Arthur E. Kallinich, who has been located in Greenville since October and who will now spend the major portion of his time in the southern territory.

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New Union Special Branch Opened in Atlanta.

Union Special Machine Company, 400 North Franklin St., Chicago, Illinois, has established a new southern branch office in Atlanta, Ga., at Spring and Williams Street. The new office is handling the sales and service of industrial sewing machines and bag closing machines in Georgia, Alabama, Louisiana, Mississippi, Florida, South Carolina, North Carolina, and a part of Virginia. P. T. McLendon is manager of this office, and H. A. Sims is his assistant. Both men have represented the company in the South for a number of years. In addition to the Atlanta office, service representatives of the company are located in Greensboro, N. C., and New Orleans, La. Complete service facilities and repair parts will be available from the Atlanta headquarters.

P. T. McLendon.

H. A. Sims.

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Laurel Appoints Distributor.

Increased service to the South is available for products of the Laurel Soap Manufacturing Co., Inc., of Philadelphia, through the American Brokerage and Warehouse Co., 505 South Cedar Street, Charlotte, N. C. This gives the company two distributing points in the South—the new one in Charlotte, N. C., and the other which has been servicing for some time in Chattanooga, Tenn.

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Cin-Made Corporation Opens Chicago Office.

The Cin-Made Corporation (formerly The Cincinnati Mailing Device Company), Cincinnati, Ohio, have established a district sales office at 608 South Dearborn St., Chicago, in charge of George H. Treviranus, who has been representing the Cin-Made Corporation, on their line of fiber cans (paper or metal ends), mailing tubes and paper cores, in Chicago and Milwaukee for the past year and a half. The opening of this new office, according to A. J. Harris, general manager of the company, is a part of an expansion program for 1932 which the company is putting into effect. Additional sales representation is planned for other sections.

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American Aniline Products Opens Southern Office.

American Aniline Products, Incorporated, 50 Union Square, New York City, have opened a southern office, laboratory and warehouse at 1000 West Morehead Street, Charlotte, N. C. A. S. Cooley, who for the past eight years has represented the company in the southern territory, is southern manager in charge; Fred L. Young is in charge of the laboratory and technical work.

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Clemson Textile Department Installs New Equipment.

The textile department of Clemson College, Clemson College, S. C., has installed a new H. & B. fly frame and a new H. & B. long draft spinning frame. The latter, which will draft from 10 to 24, is driven by the latest Reeves variable speed mechanism for increasing production and uniformity of yarn. The Clemson textile department is now equipped with three types of long draft spinning, namely, the H. & B., Casablancas, and Saco-Lowell. These frames are used for experimental and educational purposes.

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Fisher Governor Company Opens New York Office.

Fisher Governor Company, Marshalltown, Iowa, manufacturers of automatic control devices, have announced the opening of a direct factory sales and engineering office for the New York territory. It is located at 30 Church Street, New York City, and is in charge of O. M. Gaither, A. W. Bailey, and J. J. Belger.

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Terrell Represents Denman Rubber Products.

Terrell Machine Co., Charlotte, N. C., are the sales agents for the Denman Tire & Rubber Co., of Warren, Ohio, in the states of North and South Carolina, Virginia, Georgia, Alabama and Tennessee. The company's line includes rubber-fabric pickers, bumpers, bunters, parallel blocks, etc., for all types of looms. A new development in the line is a picker made of special fabric, re-inforced by metal.

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R. & H. Chemical Open Charlotte Office.

The R. & H. Chemical Department, E. I. du Pont de Nemours & Co.—formerly the Roessler & Hasslacher Chemical Co.—have opened southern headquarters at the du Pont offices at 300 West First St., Charlotte, N. C., from which the company's activities in North and South Carolina, Virginia, Georgia, Florida, Alabama and Tennessee are being directed. R. M. Levy is in charge, and C. D. Potter, Leroy Kennett and J. C. Robinson are connected with the office.

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Taylor Resigns as S. T. A. Secretary.

Walter C. Taylor has resigned as secretary-treasurer of the Southern Textile Association and its affiliated research body, The Arkwrights, Inc., D. H. Hill, Jr., associate editor, *Southern Textile Bulletin*, Charlotte, N. C., has taken over the association work temporarily until a successor to Mr. Taylor is secured, according to Marshall Dilling, executive secretary of the association, who announces that definite arrangements will be made shortly for carrying on the association work.

MODERN INDUSTRY DEMANDS COOPER HEWITT LIGHTING

Concentration of production areas demands

COOPER HEWITT LIGHT

When even our political bodies, from Congress on down, begin to eliminate bureaus and concentrate departments, we know that economy, through concentration, is the order of the day. And so it is and has been in industry.

Which is why we call your particular attention to the important part being played by Cooper Hewitt industrial illumination in this widespread movement. Cooper Hewitt light eliminates dependence on window illumination and lets you utilize every square foot of your middle-floor areas at any hour of the twenty-four. It enables you to move from other buildings your best equipment, if need be, and centralize it in one. Thus, even with a six-hour day, you can give employment to two or three shifts, with the same equipment and a correspondingly lower overhead and maintenance cost. It does away with the uncertainties of weather or season.

Cooper Hewitt mercury-vapor light means:

NO GLARE . . .
NO HARD SHADOWS . . .
EASY ON THE EYES . . .
REACHES THE WORKING POINT . . .
MAGNIFIES DETAILS . . .
BETTER THAN DAYLIGHT . . .

We stake these claims against a trial in your plant.

GENERAL ELECTRIC VAPOR LAMP CO., 853 ADAMS ST., HOBOKEN, N. J.

544 Copr. 1933, General Electric Vapor Lamp Co.

GENERAL ELECTRIC
VAPOR LAMP COMPANY

Waldron is Houghton's Southern Manager; Other Changes Announced.

H. J. Waldron has become southern sales manager for E. F. Houghton & Co., of Philadelphia, Pa., with headquarters in the Houghton office at 514 First National Bank Building, Charlotte, N. C. Other changes, effective on February 1st along with Mr. Waldron's appointment, create the following sales representation in the South for the Houghton company:

R. J. Maxwell, formerly located in Greenville, is assistant southern sales manager, with headquarters at 525 Rhodes Haverty Building, Atlanta; J. M. Keith, formerly in Atlanta, is now located in Greensboro, N. C., where Mr. Waldron formerly made his headquarters; Porter Brown, Box 656, Chattanooga, Tenn.; J. A. Brittain, 722 South 27th Place, Birmingham, Ala.; and D. O. Wylie, 514 First National Bank Bldg., Charlotte, N. C., are other representatives.

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Information on "Knitted Outerwear Week."

The number of exhibitors who will display their wares to hundreds of knitted outerwear men at the Grand Central Palace, New York City, during "Knitted Outerwear Week," February 13th to 17th, is continually increasing. Moreover, many exhibits of an interesting and instructive nature are being arranged in elaborate fashion.

One knitting machine manufacturer will display no less than four of his machines in operation, knitting novelty fabrics in a variety of intricate patterns and combinations of color such as the prevailing mode dictates. As the attention of the sportwear manufacturer is being turned greatly toward producing new fancy fabrics this display is expected to provoke widespread comment. Other manufacturers will operate machines demonstrating their particular point of interest in knitting. Needle manufacturers, yarn spinners, dyers and jobbers, as well as button makers, button hole machine companies, and numerous others will feature their articles and services in such a manner, that even the visiting layman will find the story of knitted outerwear and its production an absorbing one.

Another feature turning knitted outerwear interest to New York during "Knitted Outerwear Week" is the fact that the annual convention of the Knitted Outerwear Association is being held simultaneously. The business sessions will take the form of a series of luncheon meetings.

Among those who have reserved space are the following:

Jules Desurmont Worsted Co.; Jacquard Knitting Machine Co., Inc.; Davison Publishing Co.; Yarn Dept. American Woolen Co.; Rose Mills, Inc.; E. W. S. Jasper; Thos. Wolstenholme Sons & Co.; Masurel Worsted Mills, Inc.; H. Brinton Co.; Clifton Yarn Co.; Howes Publishing Co.; Melliand Textile Monthly; Harry Schwartz; Reece Button Hole Machine Co.; Knitted Outerwear Age; T. J. Porter & Sons; Crawford Mfg. Co.; Singer Sewing Machine Co.; Queens Machine Corp.; Mayfair Yarncraft; Schumer & Friedman; Robaczynski Machine Corp.; Textile World; Merrow Sales Corp.; N. Lands; Waterman, Currier Co.; Thomas B. Bradley, representing Statesville Cotton Mills; New Brunswick Needle Co. and Grisman Company.

A. B. Coffman is Exposition Manager, and M. E. Thayer is assisting him. The Exposition office is Room No. 1126, Grand Central Palace, New York City.

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Cotton Fabric in Roads and Dwellings.

Highway contractors, architects and residential builders from all over the United States were afforded an opportunity of seeing cotton fabric applied to new uses in road and dwelling construction at the recent Highway and Building Congress in Detroit, by an exhibit showing among other uses, cotton canvas employed in home building and cotton fabric used in highway construction.

In the display were included two miniature model dwellings which so largely utilize canvas in their construction that this type of residence is now referred to as the "cotton house." These models, designed by Lawrence Kocher, architect and editor of the "Architectural Record", were first exhibited at the recent annual meeting of the Institute in New York City. They aroused wide interest at that time and have been in demand for display at various architectural exhibits. During December they were features of a national exhibition of new trends in low-cost residential architecture at Washington, D. C.

The models illustrate a five-room permanent residence and a week-end house with exterior walls, roofs, interior walls and partitions surfaced with cotton canvas. They represent a low-cost type of durable construction—estimates for erection of the five-room house complete with plumbing, heating and garage, being not over $2500. Since its erection would require approximately 800 square yards of canvas, the potentially large opportunities for cotton in this type of construction are obvious.

Demonstrating cotton's place in highway construction, the Institute exhibited a section showing the actual construction employed in the so-called "cotton road" near Baton Rouge, La. A 2½ mile stretch of main highway there is built with cotton fabric used as the base for a bitumen surface. The fabric, impregnated with asphaltic oil, serves as a waterproof blanket and binder adding to the smoothness and durability of the road. Experiments over a period of years in other states have demonstrated the superior wearing qualities of roadway reinforced with cotton fabric.

:: :: ::

Cotton Suits.

Masculine preference for cool wearables resulted last season in the greatest volume of wash suit business ever handled by laundries throughout the United States. A survey recently completed by the Laundryowners National Association in behalf of the Cotton-Textile Institute discloses that increased business in the laundering of wash suits was experienced by approximately 88 per cent of the laundries responding to a nationwide questionnaire of the Association.

The inquiry extended not only to volume of business but also to the technical phase of the laundering with particular reference to the style, fit and appearance of the suits after repeated washings. More than 50 per cent of the reporting laundries stated that measurements which were taken before laundering and after the pressing demonstrated that results were thoroughly satisfactory. Other plants reported that good tailoring and full pre-shrinking characteristics of most of the garments had contributed to satisfactory results without the necessity for measurement.

Three of the four types of wash suits reported as constituting the bulk of the business were cotton. A large volume of the laundering was handled at a flat price of 50 cents per suit with charges varying in different sections of the country. Cotton suits for the most part were handled at the lower prices reported.

Increasing popularity for wash suits was evidenced by the returns from 21 states. While the South leads in its favor for cotton suits, the survey indicated a very wide preference for the cool wearables throughout the Middle West and growing popularity in Pennsylvania, New York, New Jersey and in some parts of New England. New England laundry owners are of the opinion that 1933 will be a good year in their section for wash suits because of the laundry-retail merchant contacts established in 1932. Laundries in all parts of the country generally reported an exceptionally large volume of business in cotton trousers.

S-W QUALITY PRODUCTS

Easier working---greater coverage ---Longer life---Lower painting cost in the long run.

This display of Sherwin-Williams Standard Products for Mill and Village Maintenance was shown at the recent Southern Textile Exposition at Greenville, S. C.

SAVE-LITE
The perfect mill white. In Gloss, Eg-Shel and Flat.

•

SAVE-LITE FUME RESISTING WHITE
Resistant to chemical and acid fumes.

•

SAVE-LITE MOISTURE RESISTING WHITE
The ideal white for applying to walls that contain free moisture.

•

MILL VILLAGE PAINT
An exterior finish of unusual covering capacity and long life.

•

VELVET ENAMEL
Produces a subdued sheen that gives a most attractive appearance to the interior of cottages.

•

VELVET WALL FINISH
A fine flat wall finish for interiors of cottages and offices.

•

KROMIK STEEL PRIMER
Highest quality primer for structural steel and all metal surfaces.

METALASTIC
High quality metal protective finishing paint.

•

ELASTIC ROOF CEMENT
A plastic cement containing asbestos fibre; ideal for patching roofs.

•

EBONOL
The ideal Black for composition and metal roofs.

•

LIQUID ROOF CEMENT
Recommended for repairing all types of roofs.

NOTE: *Textile offices at Philadelphia, Charlotte, Spartanburg and Atlanta. Our warehouses at Charlotte and Spartanburg carry stock for prompt service and convenience of the textile trade.*

S-W STANDARD DISINFECTANTS

OYLAPINE. Odor of Southern pine. For use where disinfectant with pleasant odor is needed.

PHENOLENE: Standard coal tar dip with carbolic acid coefficient. For floors, drains, lavatories, etc.

S-W DISINFECTANT: A coal tar disinfectant two or three times more powerful than carbolic acid. For general use.

S-W LIQUOR CRESOLIS COMPOSITUS U. S. P.: For use principally in hospitals and by physicians for washing wounds and sterilizing instruments. Made according to the specifications outlined in United States Pharmacopoeia.

CRESOLEX: A commercial substitute for Liquor Compositus, U. S. P.

S-W PINE OIL CLOSET CHEMICAL: An effective germicide with a pleasant odor.

S-W CLOSET CHEMICAL. Coal tar disinfectant with powerful deodorizing and disinfectant properties.

SHERWIN-WILLIAMS

STANDARD PRODUCTS FOR TEXTILE MILLS AND VILLAGES

COMMENT ON THE COTTON MARKET

New Orleans, January 14th, 1933.

With the dawn of the new year there appears to be a more hopeful feeling as to the future on both sides of the Atlantic. Apparently the impression prevails that the world-wide depression probably spent its full force in 1932, and that the opening of the new year will be the harbinger for better times at home and abroad. There is a somewhat more cheerful feeling in Wall Street, general conditions are reported as improving in Germany, and late press cables from England are more encouraging, London having advised in part: "The persistent belief that the way is now cleared for a definite revival of British trade as soon as international developments provide the necessary encouragement is markedly reflected in the stock markets and financial circles."

During the first half of the past month the cotton market was more or less under pressure, due to larger ginnings than generally expected, January liquidation and hedge selling. But there was a good demand for contracts on the scale down, and thereafter contracts continued in good request by the trade, and there was much price fixing until of late, which, together with the firmness of the stock market and higher wheat, provided support sufficient to cause a sharp recovery in cotton values. Talk of possible currency inflation and possible farm relief legislation were sustaining influences. Compared with one month ago cotton values show slightly higher.

WORLD'S INDICATED SEASON'S SUPPLY OF ALL KINDS OF LINT COTTON:

Season— Bales—	1932-33	1931-32
World's carry-over of American, August 1st.	12,911,000	8,710,000
Indicated crop, government estimate, Dec. 8th	12,727,000	17,096,000
World's carry-over of foreign, August 1st...	4,187,000	5,000,000
Indicated foreign crop, government estimate, Dec. 30th	11,300,000	10,404,000
Total, about	41,125,000	41,210,000

It was estimated recently that the world's supply of all kinds of lint cotton at the close of November was 32,168,000 bales versus 32,526,000 on corresponding date last season. Therefore, it would seem as if the world's total supply for this season and that remaining at the end of November was about the same as it was last season, whereas the price of Middling in New Orleans yesterday was about 40 points lower, or $2.00 per bale cheaper than on corresponding date last year, which probably partly accounts for the steadiness of the market since the indicated supply and price is about the same as one year ago.

BRITISH BOARD OF TRADE REPORT FOR DECEMBER.

Year—	1932	1931	1930
Exports of yarn, pounds	12,000,000	15,000,000	12,000,000
Exports of cloth, yards	196,000,000	150,000,000	130,000,000

While exports of yarn were smaller than for December last season, they were larger than the 10,000,000 for November of this season, and as there was a substantial gain in shipments of cloth as compared with December of last season and season before last, the returns were considered as highly encouraging.

CENSUS REPORT.

United States— Bales—	This season	Last season
Consumption of lint, December	440,062	415,401
Consumption of linters, December	44,275	45,911
Consumption including linters, December	484,337	461,312
Consumption of lint, 5 months	2,340,284	2,191,017
Consumption of linters, 5 months	263,483	288,269
Consumption including linters, 5 months	2,603,767	2,479,286
Mill stocks, December 31st	1,580,110	1,630,719
Stocks in public storage and warehouses, December 31st	10,349,808	10,414,412
Mill stocks, stocks in public storage and warehouses, December 31st	11,879,918	12,045,131
Mill stocks, stocks in public storage and warehouses November 30th	12,134,275	12,151,312
Active spindles during December	23,775,136	24,688,094
Active spindles during November	24,349,506	24,870,182

While Census consumption returns for December appear favorable, they were about 64,000 bales smaller than for November this season, whereas for December last season they were only about 10,000 bales smaller than for November, and it was noticed that active spindles showed a greater decrease during December this season than for December last season, which is rather disappointing.

CROP MOVEMENT, EXPORTS AND SPINNERS' TAKINGS OF AMERICAN.

August 1st to January 13th— Bales—	This season	Last season
Brought into sight (marketed)	10,095,000	11,863,000
Exports from U. S., inc. Canada	4,578,000	4,423,000
Spinners' takings (world)	7,163,000	7,247,000

WORLD'S VISIBLE SUPPLY OF COTTON, JANUARY 13TH.

Bales—	This year	Last year
American	10,102,000	10,061,000
Of other kinds	1,686,000	1,816,000
Of all kinds	11,788,000	11,877,000

The demand for spots in the South has not been so brisk of late, sales for the week at reporting markets having fallen off from the previous week and from the corresponding week last year, totaling 136,000 bales versus 209,000 and 191,000 bales respectively. Domestic mills are reported buying only actual requirements now, and are watching the progress of the allotment plan legislation. For the near future the export outlook is not so favorable.

When the contract market was bulging recently, there was some activity in the goods markets, but of late trading fell off some, with the market ruling quiet and somewhat easier pending further developments in the farm relief program.

The conflict in the Orient seems to be assuming serious proportions, which is to be deplored, but if followed by a declaration of war by China against Japan, may result in the developing of an urgent demand from the Far East for raw cotton, as the East Indian crop is now estimated at only about four per cent larger than last year's small crop. In that case, if war is declared, the conflict may be of long duration.

Meanwhile the trade is much concerned as regards pending legislation in connection with the proposed domestic allotment plan. The ultimate fate of the proposed "plan" of farm relief, is uncertain, for while it recently passed the House, it has to run the gauntlet of the Senate and the possibility of a veto. If defeated in the Senate or vetoed, such legislation would likely have to go over to the next session of Congress, when it would probably be too late to have much if any effect on the acreage for the next crop.

As to the acreage to be planted to cotton in the South next spring, much, therefore, will likely depend upon whether or not the domestic allotment plan wins or loses in the present session. If it wins, the acreage may be reduced 20 per cent, but if it loses, farmers would probably be at liberty to cultivate as much cotton as they choose. Five or 6 cents cotton usually results in a decreased acreage, but this year may be an exception to the rule since the price of grain is so very low that preference may be given to cotton, especially on the western plains. There is reported an abundance of farm labor, due mainly to the business depression. However, there is not much incentive in the low price of cotton to increase the acreage. In some districts of the belt it is said there is some disposition to decrease the acreage. The acreage question, therefore, remains uncertain for the present. There is said to be a good season in the ground now, the result of the generous rains during December and subsequently.

TOTAL AVERAGE RAINFALL IN TEXAS.

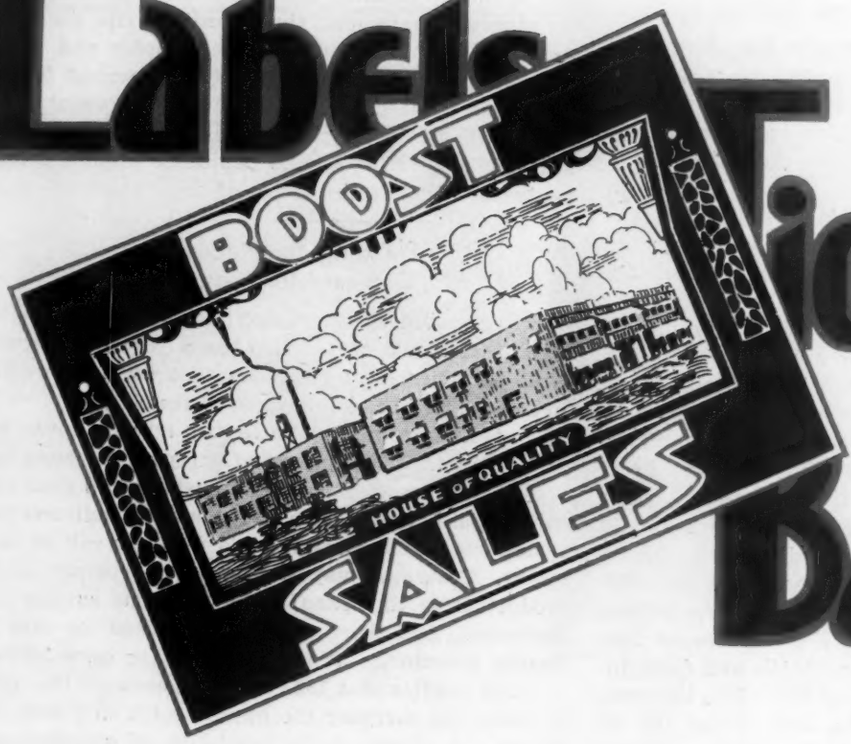
Inches— Year—	1932	1931	1930	Normal
December	3.45	3.96	1.98	2.19
November to December, inclusive	4.27	6.16	4.65	4.51

Consumption of Cotton in Electrical Industries.

Cotton requirements of the electrical manufacturing industries reach a surprisingly large yardage of fabrics and poundage of yarns for diversified uses in annual production of electrical equipment and accessories, according to figures compiled by the Cotton-Textile Institute. Cotton's important role in the electrical field is, of course, familiar to the manufacturing units of that industry but elsewhere is likely to pass unnoticed.

One of cotton's major uses is in the form of thread and yarn for the strengthening, the protection, and the insulation of wire and cable. Figures furnished to the Institute by leading manufacturing concerns indicate that approximately 4,000,000 pounds of cotton thread and yarn are required annually for the purpose.

Labels Tickets Bands



BRANDED textile goods penetrate markets which others find difficult or impossible to enter. And once established they resist assaults of unbranded products and assure their makers steadier production with consequent larger profits.

An experience of many years coupled with mechanical facilities equaled by few other organizations in the country enables us to offer exceptional service to textile manufacturers and selling agencies in the design and production of labels, tickets, bands, hang tags and bolt ends.

This service includes both original design by artists thoroughly familiar with textile packing technique and faithful reproduction of designs already in use. Highest quality of workmanship goes hand in hand with charges which usually mean substantial savings to purchasers.

We shall find pleasure in submitting idea sketches for new designs and in quoting on any type of textile label or band---all without obligation.

JACOBS GRAPHIC ARTS COMPANY
DESIGNERS AND PRODUCERS OF TEXTILE PACKINGS
CLINTON___SOUTH CAROLINA

Building for Profits by Putting the Textile House in Order

(Continued from page 33.)

while another, in the same line with the same sales possibilities and carrying an appreciable profit, is practically ignored. Too much cannot be said about the advantages of having a reliable cost system, one that truly informs those directing the affairs of a mill.

Most mills are aware of the importance of scientific purchasing and testing of supplies. Large organizations have a decided advantage over smaller units in this respect, but small mills may overcome some of the disadvantages of limited purchasing power by joining in with other mills in purchasing their supplies. It should suffice here to state that buying is not the mere spending of dollars and cents. One of the textile industry's most capable purchasing agents has aptly said "I don't buy supplies, I sell dollars." Knowing when it is advantageous to change from one product to another or from one brand to another is most important. In order to be able to make such decisions wisely the person entrusted with the duty of purchasing must be thoroughly trained in purchasing, have an intimate knowledge of conditions in the mill, be skilled, versatile and farsighted, and have the co-operation of the mill's key men. Much experimenting should be done under the direction of the purchasing head. The cheapest article is not always the most economical. The mill fares best in purchasing that finds out what supplies will prove to be the most economical in the long run.

Office administration, cotton buying, systems of maintenance, research and many other items might be included in an article dealing with "building for profit" for after all everything and everybody connected with a mill have some bearing upon profit. In building for profit it is wise not to overlook anything. Sometimes the most dangerous profit leaks take place at some inostensible place. An unfortunate and untimely edict may shut down a mill for a long period of time. An untried supply item may be responsible for hundreds of yards of seconds. An unsafe condition or a careless worker may cause the expenditure of thousands of dollars in compensation and medical expense. The death of a key man may prove very costly to a mill if there is no one ready in step in and take his place. There is much more for a mill to do in "building for profit" than to modernize the physical equipment. Opportunity is ripe for individual mills to put their houses in order and to be truly prepared for the hoped for return of better days. It is realized that limited finances prevent some mills from developing a program such as they desire, but such mills should capitalize upon this advantageous time to the extent of their ability.

Planning for Recovery

(Continued from page 25.)

readily observed although starting slowly. It is to be hoped that it will not develop too rapidly as that will cause variableness and excesses that will temporarily distort the trend and so help delay the climb.

In 1933 more financial attention must be given especially to the building up of strong cash reserves. They are necessary for a sound business and absolutely essential to enable recovery. Some expenditures for modernization of equipment and facilities will be necessary. Some cash may be required to promptly adapt production to the manufacture of goods suiting the customer. And there will be a real need for cash to finance inventories at rising prices for commodities.

It is possible that 1933 may be somewhat like 1932 in totals but carrying the improvement on a slow recovery. A glance at the tabulation of spindle-hours will be helpful. The low volume of 80,275,000 spindle-hours in 1924 was followed by three years of increasing production. The eight years ended in 1929 required an average of 95,149,000 spindle-hours. In the past three years the average production has been 74,898,000 spindle-hours. An increase of 27 per cent in production will return the volume to the previous eight-year average. Such an increase in total will make a very substantial increase in the volume to some mills. While there may not be a shortage of spot-merchandise, there is some deficiency of consumer goods as brought about by the below-average purchasing in the past three years. This demand may appear suddenly and it is to be hoped that reasonable individual control will be exercised so that sales prices may be stiffened slowly to avoid bringing idle spindles back to needless competition.

Increased Activities of General Arbitration Council.

Increasing reliance upon arbitration in preference to settlement of disputes by litigation is indicated in a report of the 1932 activities of the General Arbitration Council of the Textile Industry. The report, as submitted by Frederick A. Colt, Secretary, to George A. Sloan, Chairman of the Council and President of the Cotton-Textile Institute, discloses that 23 cases were formally arbitrated in 1932 compared to 8 cases in the preceding year. In addition there were a number of adjustments effected between parties having controversies by informal negotiations promoted with the cooperation of the Council's Secretary.

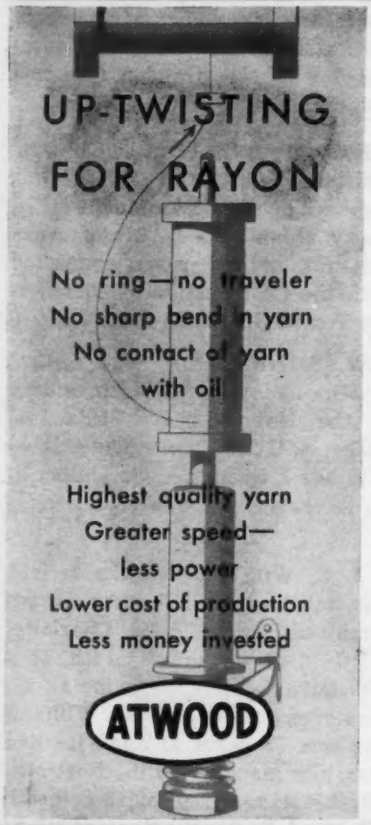
Attention is called to a development of particular encouragement for the progress of arbitration. In most cases awards have been willingly accepted and followed in many instances by friendly resumption of business relations between the parties whose cases were decided by the Council.

Claims presented for arbitration involved sums ranging from about $1,000 to approximately $15,000. Fees for the Council's services were nominal, approximating $10 for each party in various cases, and not over $25 each in most other cases. In general, the awards were speedily reached and represented a saving in time compared to litigation which may be estimated from the statement of an eminent lawyer, experienced in arbitration, who says that on the average it takes two and one-half years to dispose of a dispute in the courts of New York County. Another advantage, according to the same authority, is that arbitration insures the disposition of each case by persons who are expert in the questions at issue, and by the application of simple business judgment and common sense. The saving in litigation expense is, of course, obvious.

For Rayon Twisting

"MONARCH"
TWISTER
Built in Single and
Double Deck Models

Driven by one
or two motors
as desired



NEARLY every rayon manufacturer in America uses Atwood Up-Twisters for twisting the rayon filaments into rayon yarn. Almost all of the subsequent twisting on rayon yarn is also done on Atwood Up-Twisters.

The simplicity of the Up-Twisting method has important advantages. The yarns produced are highly uniform in twist and of extreme cleanliness. The production is higher—the initial investment and the production costs are lower. The "Monarch", shown above, is the choice of leading mills for the Up-Twisting of rayon.

Atwood advice, based on years of practical experience, is yours for the asking. Our engineer will be glad to call. Write today.

THE ATWOOD MACHINE COMPANY

FOUNDED 1852

STONINGTON, CONN., U. S. A.

Sales Offices: New York Wilkes Barre, Pa. Stonington, Conn.
Charlotte, N. C. Los Angeles, Calif.

PERSONAL NOTES

about Men You Know

V. H. BRUNEAU has been promoted from superintendent of the Canada Mill of Canadian Cottons, Ltd., Cornwall, Ontario, Canada, to manager of the St. Croix Mill of the same company, in Milltown, N. B., Canada.

C. L. CHANDLER, who has been superintendent of the Gaffney Manufacturing Co., Gaffney, S. C., for the past 15 years, recently resigned to become, effective January 1, vice-president and general manager of the Jackson Mills, at Iva and Wellford, S. C. At Gaffney, O. A. SULLIVAN, assistant superintendent and overseer of carding, was promoted to the position of superintendent succeeding Mr. Chandler.

Mr. Chandler.

PAUL A. MERRIAM, formerly chief engineer of the U. S. Finishing Co., has been appointed by Riggs & Lombard, Lowell, Mass., manufacturers of textile finishing machinery, as their representative in Rhode Island and adjacent territory. His headquarters are at 52 Moorland Ave., Edgewood, Providence, R. I. Mr. Merriam has had a wide experience in textile finishing, particularly cottons and rayons, having been successively assistant engineer, resident manager of the Cedartown branch, and chief engineer in charge of all engineering work at all seven plants of the U. S. Finishing Company, which position he has held for the last five or six years. Mr. Merriam is a senior member of the American Society of Mechanical Engineers and chairman of the executive committee of the Society's textile division.

E. M. POTTER, of Charlotte, N. C., has joined the sales force of U S Bobbin & Shuttle Co., of Manchester, N. H., and will represent them in the North Carolina territory.

J. W. HAMES, formerly superintendent of the Exposition Cotton Mills, Atlanta, Ga., and more recently superintendent of the Shelbyville, Tenn., Mills, has become superintendent of the Adams-Swirles Cotton Mills, at Macon, Ga., succeeding W. R. MCELVEEN, who has returned to the Southern Manufacturing Company at Athens, recently acquired by the Athens Manufacturing Co. Mr. Hames is also superintendent of Washington Mfg. Co., Tennille, Ga.

NEWTON G. HARDIE has resigned as superintendent of the Oconee Mills Co., Westminster, S. C., to become superintendent of the Inman Mills, Inman, S. C. The late LAWTON P. DUNCAN, who was also general superintendent of the Riverdale Mills, Enoree, S. C., was until his death superintendent at Inman.

W. D. JENKINS has become superintendent at Oconee Mills Co., Westminster, S. C., succeeding Mr. Hardie. Mr. Jenkins was formerly assistant superintendent at Aiken Mills, Bath, S. C., where he is succeeded now by D. A. PURCELL, from Patterson Mills Co., Roanoke Rapids, N. C.

J. F. MORRIS has become superintendent of the Puritan Weaving Co., Fayetteville, N. C. B. F. SORGEE is night overseer of weaving at this plant.

C. C. PAGE has been promoted to night superintendent at the Sibley Manufacturing Co., Augusta, Ga. He was formerly overseer of spinning.

I. K. EDWARDS has been promoted from overseer of carding to night superintendent at the Arkwright Mills, Spartanburg, S. C. CARL CRIDER has become overseer of weaving at this plant.

MARION T. GRIMES has been elected agent and a director of the Chicopee Mfg. Corp., Gainesville, Ga. As agent he succeeds E. A. MCCORMICK, who remains as a director. Mr. Grimes has been superintendent of the mill since it was started in 1927. HARRY H. PURVIS, a graduate of the Georgia School of Technology in textiles, who has been overseer of spinning and assistant superintendent, was made superintendent succeeding Mr. Grimes.

HERMAN TAYLOR, formerly assistant designer at the Watts Mills, Laurens, S. C., has become assistant to the president at the Pelzer Mfg. Co., Pelzer, S. C. Mr. Taylor is a graduate in textiles at Clemson College, S. C., Class of 1926.

L. H. MAYFIELD, former student of the Clemson Textile Department, is now designer at the Spencer Corporation, Spindale, N. C. L. E. BAGWELL, graduate of the department last year, has accepted a position with the office force of the Watts Mills, Laurens, S. C. H. C. WHITMIRE, a member of the same class at Clemson, has become associated with the Brandon Corporation, Greenville, S. C.

RONALD E. STEVENS has become assistant to HYMAN L. BATTLE, manager of the Rocky Mount Mills, Rocky Mount, N. C. Mr. Stevens was for several years connected with the Cost Section of The Cotton-Textile Institute, Inc.

W. S. NICHOLSON, who several months ago resigned as president of the Union-Buffalo Mills Co., Union, S. C., has become associated with the Excelsior Mills, Union, S. C., in charge of manufacturing.

Obituary.

J. E. WILLIAMSON, who retired last fall as superintendent at the Highland Park Mfg. Co., Charlotte, N. C., died on January 14th, at a Charlotte hospital, following an illness of several weeks. Mr. Williamson was 65 years of age. He had been also manager of the Fort Mill (S. C.) Mfg. Co., prior to going to Highland Park a number of years ago.

sonoco RE-ENFORCED CORK COTS

32 years experience in solving many important problems in the Textile Industry have not only contributed to, but have been our inspiration in, the development of the SONOCO Re-enforced Cork Cot, already accepted as standard equipment throughout, in many representative mills.

STARTING with the advantage of a low first cost, the SONOCO Re-enforced Cork Cot actually wears annual roll covering costs down to a figure that is surprising many representative mills with important savings.

Briefly, a long life cot, a cot of equal or better drafting qualities, a cot extremely easy to apply and a cot that can be re-surfaced several times, spells economy to every user, even without the added advantage of that interesting low first cost, peculiar to the SONOCO COT.

SONOCO ventures no unfounded claims regarding their improved cork cot. Our testing laboratory has been the spinning frame in a variety of mills, where we have run competitive production tests, under varied circumstances and on various types of yarn. Tabulated and proven results are the only reason why many mills have already standardized on the SONOCO COT.

Simplified Roll Coverer

SONOCO PRODUCTS COMPANY

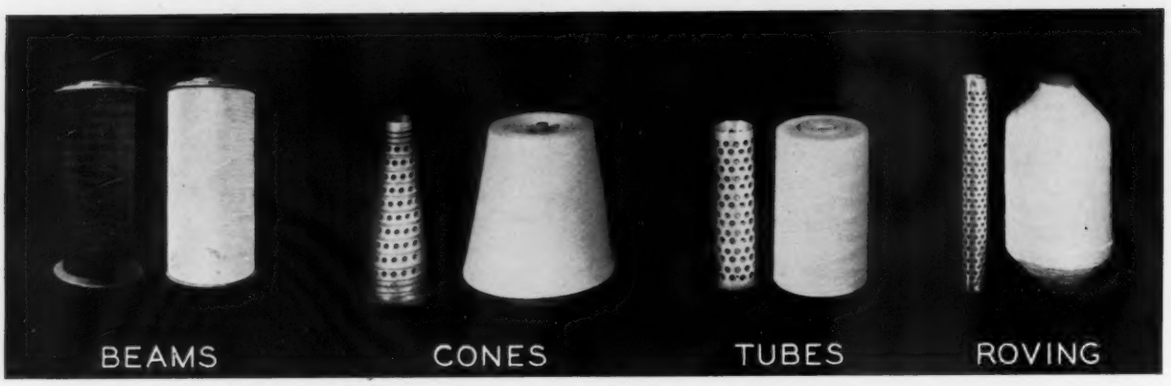
HARTSVILLE • SOUTH CAROLINA

Mills: Hartsville, S. C.; Rockingham, N. C., and Plainfield, N. J.

Eastern Sales Office at 709 West Front Street, Plainfield, N. J.

New England Sales Representative P. O. Box No. 170 New Bedford, Mass

"We Have Dyed Everything From Beams to Roving, on the Gaston County Dyeing Machine."



...and are more than satisfied with the service from the machine we have in our mill."

SUCH versatility is an added advantage of a machine whose prime virtue is the low cost production of high quality dyeing and quick deliveries of from ten to ten thousand pounds or more. The mill manager who is quoted above went on to say:

"We do job dyeing in addition to our own dyeing, and we have made a study of the Gaston County machine and its possibilities and we know the advantages of this machine from the standpoint of turning out uniform dyeing. Therefore whenever a job comes to us we always do our best to put it through the Gaston County Dyeing machine for when we do, we know there will be no question about the quality of the work."

For high quality dyeing of infinite variety, Gaston County Machines produce uniform work to a degree which will cut your costs. Our new descriptive literature will give you a first hand picture of the possibilities. Write today.

GASTON COUNTY DYEING MACHINE CO.

Manufacturers of Combination Dyeing and Combination Drying Machinery

Main Office and Plant: STANLEY, NORTH CAROLINA

AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

Reading Some of Old-Timer's Mail

DEAR OLD-TIMER:

Ever since your department was started, you have been receiving a lot of mail from your readers. What do you think of using your department some time soon for publishing extracts from your correspondence? We feel that this would undoubtedly be of interest to your readers and would especially encourage many of them if we showed some of the definite results of your articles and the Study Course which you conduct for ambitious readers who want to improve themselves.

If you think this a good idea, send me your correspondence file so we can pick out a few of the letters you have received during the past year or so.

THE EDITOR.

* * *

DEAR EDITOR:

Here's the file. I think the idea is a good one. In fact, your suggestion is only a repetition of one I expressed along exactly the same line some months ago. Glad to see you getting around to it.

When you publish the letters, be sure to tell the readers how very much we appreciate hearing from each and every one, and urge them all to write in to me. And remind any of the ambitious ones that we'll be pleased to tell them more about our Study Course, which will help them, put more money in their pockets, and aid them toward that better job that can come only when a man has prepared himself and is ready for it.

OLD-TIMER.

* * *

DEAR READER:

The foregoing exchange of letters explains why we are departing for this month from the usual material on OLD-TIMER'S page. Extracts of only a few of the many letters received by OLD-TIMER appear herewith. Please bear in mind that OLD-TIMER'S only means of knowing how you take his articles is by hearing from you, and remember that he will personally appreciate letters from any of you. He is not asking for compliments; he wants to know also when you disagree with him.

About that Study Course: We get a great deal of pleasure in operating it. We feel it is doing a tremendous amount of good. We invite any reader who wants to follow it as a means of improving himself, and who has the grit and determination to carry through with it, to ask us the details.

THE EDITOR.

From a superintendent, originally from Gastonia, now working in South Carolina:

I often wonder how far OLD-TIMER desires to cover his identity, and to what extent he succeeds in doing so. There must be many other readers of COTTON who have as good memories as mine.

It is impossible for me not to recognize the character of the word picture painted by OLD-TIMER in a recent issue of COTTON, and described as a former overseer with little formal education, a remarkable brain and wonderful personality. I have not seen or heard from him in about ten years. I think that I shall write him some day.

About the same time of which OLD-TIMER writes, this same man recommended to my father that he buy Brook's book on weaving and subscribe to the *Textile Excelsior*, the first textile literature that I ever saw.

At the time of which you write, OLD-TIMER, you were totally oblivious to my existence, for I was one of the crowd of mean little doffer boys, and was learning to weave at noon time. At that time you had reached the place of loom-fixer, which seemed to me—and does yet—to be a very important place. You were also a ball player and the only man around with more than a smattering of technical knowledge. These three things made you somewhat of a hero to my ten-year-old eyes, and may account for my remembering many of the things of which OLD-TIMER writes.

Of that dim and distant past there are misty memories of shadowy scenes with a texture between, spider webs and shadows that are just ready to pass over the border into the limbo of forgotten things, when OLD-TIMER takes his pen and pushes back the curtain and lets the light in on pictures that again become living scenes.

I seem to have dim memories of a fight at the baseball park, my school teacher's sister's beau, someone reading the Spanish-American War news to a group at the depot on Sunday morning.

Say, you better tell Bob Philip to put a muzzle on me!

To the Editor, from a man in a mill where, by the way, OLD-TIMER *held his first superintendent's job:*

I am not a subscriber to COTTON. I will be soon, as I have just finished reading OLD-TIMER and will say that I like it very much. I am trying to improve myself and would appreciate getting an outline of OLD-TIMER'S study plan. * * *

* * *

From the same man, later:

I have just finished reading your articles that the editor was kind enough to send me. Your talk to JIM in the cloth room was the best, to my way of thinking. When you mentioned the press and JIM'S remark I surely did laugh. There is a bushel of good common sense in every article. You made me feel that I am JIM myself, in JIM'S shoes.

* * *

Still another from this man:

I have just read your article in the March issue. I like it very much. OLD-TIMER, I am studying every night. I have read "Every Man a King", one of the books you recommended. I am reading it the second time. * * * Your interest in my behalf puts new life into me.

* * *

From an overseer of carding in North Carolina:

My copy of OLD-TIMER'S book received a few days ago, and I want to say that it is impossible for him to know the good he is doing. I have been fortunate in reading the most if not all of his talks as they were printed in COTTON. I often read one of his talks before going to work and I find that this gives me new thoughts for the day and inspiration to make my job better than it was the day before.

* * *

To the Editor, from an Alabama overseer:

I am a constant reader of COTTON and get much pleasure and information from it. In OLD-TIMER'S last article he mentioned something of particular interest to me. I will quote two paragraphs: "If you know all about the machinery and management of your job, why not take up some constructive reading and devote one or two nights a week to it. * * * If you don't know what to start on, write the Editor for one of the courses that OLD-TIMER has laid out for COTTON'S readers." I am a young man, an I. C. S. graduate, at present overseer of the cloth room. I have also been overseer of spinning. I desire to keep in step with modern times and with methods that will help me forge ahead. Please send me information regarding OLD-TIMER'S courses.

* * *

From the management of an Alabama mill:

We are interested in having a thousand copies of OLC-TIMER'S article, "A Lesson for Southern Workers". We are desirous of making distribution of these ourselves. Kindly enter our order for one thousand and bill us accordingly.

* * *

From a college man with a Georgia mill:

I have just finished reading Vol. I of your reprinted articles, and have derived much from its contents. Your expression on page ten, I have underscored: "We are either coming or going, there is no such thing as standing still". This not only applies to a man in a business way, but applies as well in physical, mental and spiritual matters. Too, it is effective in a man's habits of soberness and moral conduct. Your closing chapter, with its initial word Success, also bears a message to every man, as accident never put a man into a responsible position permanently. Sometimes pull and friendship will place a man, but it never holds him there. I would like to receive one of the courses you have laid out for COTTON'S readers, as mentioned in the current issue.

* * *

From the superintendent of a southern colored goods mill:

You may not know how to play marbles or shoot rabbits—as you bring out in your current letter—but anyone who reads your sayings surely knows that you know your stuff and that you hit the nail on the head every time!

* * *

From a superintendent in Gaston County:

You remember a long time ago you asked the overseers and superintendents a question, and you asked us not to try to answer it for at least two weeks. That question was: Would You Hire Yourself for Your Job? Well, after all this long time I don't know whether I would or not. Sometimes I think I would, then something will happen to cause me to think I am careless or something and then I try to run it so as to be able to feel that I would hire myself to run it, but, as you say, one will have to work and study a long time before he can honestly answer this question and be honest with you and himself. But there is one thing I can truthfully say: That question helped me lots, and I surely do appreciate it and the other articles you are writing for the readers of COTTON, and I promise now to try to do my best to prepare to answer that question yet.

* * *

From a college man, production manager in a South Carolina mill:

I note with interest OLD-TIMER'S remarks in the June issue of COTTON, and am writing you to find out whether it is possible for me to receive an outline for the pursuit of knowledge such as he recommends.

* * *

From this same man, later:

I want to thank you for the first lesson which has been assigned to me. I appreciate the kindness, and hope the student will prove a source of pride to his teacher. My progress thus far has been rather slow. In an effort to save the cost of a dictionary, I have used two ordinary family models, and neither is satisfactory. However, I have "He Can Who Thinks He Can" and "Every Man a King". Frankly, I am not getting very much out of the subject matter. This is due to the fact that I am pursuing words, their meaning and synonyms. I look forward to the second reading when the authors' thoughts will be clearer. Frankly, too, I am ashamed that some of the words, whose meaning is not entirely clear, are so common. I have found few which are entirely unfamiliar, but many that are faintly understood. These cause most

of the study and trouble. There is no regret, though, for what once was assumed knowledge becomes certain knowledge, and with that, according to the line of yours which started me on this course, more power.

* * *

From a member of OLD-TIMER'S *study course, in North Carolina:*

Hello, OLD-TIMER! I guess you thought I had quit, but not me. From now on, I am a seeker after knowledge. You will excuse me this time, OLD-TIMER, for not writing to you on schedule, but we have had sickness, and on top of that, the general manager put in a lot of western cotton and strips that were so wiry the work would hardly draft. But you see I am optimistic; these things are preparing me for a better place. Yes, OLD-TIMER, I finally got my drawing and slubbers running good again, and I am going to check up on my speeders next week, and I'll let you know how I come out.

* * *

From a man in Lewiston, Maine, who had just received OLD-TIMER'S *book:*

I was very much pleased with your Vol. I. The articles are all concise and to the point. I noticed some that I had somehow or other missed in the regular editions of COTTON. Some of your talks to Jim certainly made me sit up and take stock. As I passed the volume around to my overseers to read, I could see that they had taken considerable notice of it too, and began to check up on things. I am going to save this volume to refer to from time to time as I need it.

* * *

From a Canadian knitting mill superintendent, taking the Study Course:

Enclosed please find my first article, a copy of which I have sent to COTTON for "KNITTING KINKS". I welcome constructive criticism and I would be pleased if you have any to offer. I have all of the books suggested by you with the exception of "Four Minute Essays", and I hope to have them soon. I enjoy reading "He Can Who Thinks He Can", and I am trying to put into practice the precepts taught therein.

* * *

Another mill man in Canada:

The course that you have outlined for me looks very interesting and I hope that I can do justice to it. Only one book of the list you submitted is procurable here. I am getting them from the publishers. As I was not a subscriber to COTTON during 1927 I haven't the articles on "Points of Law Which a Mill Man Should Know", and I will be grateful if you can supply me with a set. Acting on the advice of Mr. Philip I am setting aside two nights a week and two hours a night for studying. It certainly will be something new for me to write articles, but it looks very promising to me.

* * *

A South Carolina mill man:

As I have long been an admirer of yours, I am very much interested in your OLD-TIMER Club and souvenir, and I am wondering if this will help me to put new life into myself as well as my overseers. In the announcement of your offer of the souvenir in COTTON this month, I notice in particular one line: "We know that the slogan will make you a better man, and put dollars in your pocket." I am satisfied that if OLD-TIMER will help me to get a new line of thought, and consequently make me a better and more valuable worker, the dollars will take care of themselves.

* * *

An Overseer of Spinning:

* * * I think if OLD-TIMER keeps up his hard-boiled stuff he will work me to death. I almost think it is my boss talking to me, but let him have his way. I am willing to take anything he puts out.

* * *

From the president of a southern college:

"Would I Hire Myself for My Job?" This is the most searching question that I have seen in a long time. I do not think that I shall answer it for myself.

* * *

This one is several years old, but it is included because it comes from one of the superintendents quoted previously:

Dear Editor: If you can, I will be very glad indeed if you will spare a little more space in COTTON for OLD-TIMER to talk. It is so encouraging to sit down after a hard day's work and read what he has to say. I am overseer of spinning now, and my intention is to improve myself, and I don't know of a better way to be sure one is on the right track than to read after men like OLD-TIMER.

* * *

From a Georgia superintendent:

Dear OLD-TIMER: I read with interest your articles each month and appreciate how hard you are trying to drive us into helping ourselves to be something, so please send to me your plan of a systematic course of study and I promise to do my best to improve my own knowledge by following your suggestions. Keep up the good work, because so many of us need someone to knock some dad-gummed common sense into us occasionally and wake us up to the real possibilities that are confronting us until it is pitiful.

* * *

We have taken the foregoing comments out of a most voluminous file of such letters which OLD-TIMER keeps and cherishes. The purpose has been to inspire by examples a thorough study of OLD-TIMER'S articles by other readers; to draw attention again to the Study Courses available to ambitions readers who have what is elegantly termed intestinal fortitude to carry out the plans which OLD-TIMER gives for self-improvement; and to invite requests for more information on the subject from any reader who is interested and thus equipped. If you are only curious, please don't write, but if you really want to carry out a definite program of self-improvement, we hope you will write and ask us for OLD-TIMER'S Course of Study.

OLD-TIMER operates also an OLD-TIMER Club, with a useful and valuable souvenir. If you've got the grit to live up to the requirements, we invite your application for membership.

OLD-TIMER conceives as of paramount importance in the development of the textile industry the training of its man-power. He is committed to the responsibility of doing his share in that direction. He values above all other possible compensation any comments from any of his readers—and so invites you to write to him.—THE EDITOR.

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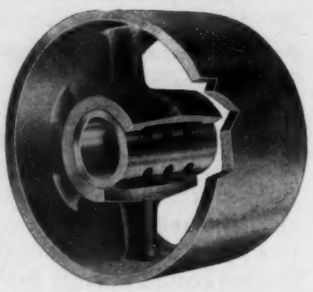

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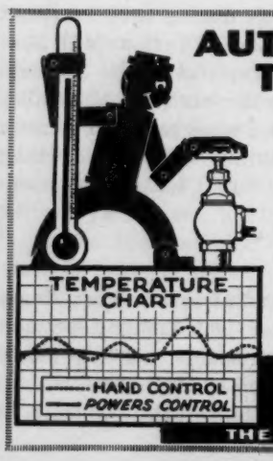

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HOW OTHER MEN MANAGE

Practical Discussions by Cotton's Readers On all Varieties of Mill Subjects

Some Thoughts on "Home Made" Long Draft Systems.

A word of caution to mills on cotton 1 1/32-inch and shorter about this arrangement . . . . .

EDITOR COTTON:

Within recent months, since the presentation at the Greenville textile show of a long draft system for spinning, of which the salient features are four lines of rolls, with 7/8-inch front steel roll and 5/8-inch second roll, the top second roll being self-weighted and comparatively light—several superintendents of print cloth and sheeting mills have conceived the idea of changing their old style, three-roll frames to conform as nearly as possible to the four-roll system.

The writer is in no way connected with a manufacturer of long draft systems, and has no other interest in this matter than that of seeking and dispensing facts about it. He wishes to give a word of warning, on the basis of his experience, to those inclined to remove all the weight, except of course its own weight, from the middle top roll of their three-roll frames, and then increasing the draft.

In the first place, this unweighted middle top roll isn't a new idea. One whose experience has been on cotton shorter than 1-1/16-inch might have heard of it only recently, but mills running longer staple than this have been using unweighted or self-weighted middle top rolls for many, many years.

The writer has had experience with three types of self-weighted middle rolls: (1) the regular cast iron roll, leather covered; (2) the Hinds or tube steel roll, at first not covered but later turned down 1/16-inch in diameter for a distance of approximately 1-inch in the center and leather cots burned on; and (3) the Washburn or wooden leather-covered roll with steel core. Since the majority of the mills changing or planning to change to the "home-made long draft" system expect to use the present cast iron leather-covered roll for the top middle roll, detailed discussion of its performance is most important.

My first experience with the cast iron self-weighted roll was in a combed yarn mill, using 1¼-inch and 1⅜-inch cotton, spinning 60s to 90s. This was before we knew about the light rolls, such as Hinds and Washburn. If the saddles had pressed on this middle top roll we would have had to set the front and middle rolls approximately 1-5/16-inch and 1-7/16-inch apart for the staples shown. By the middle top roll being self-weighted we could shorten these settings by ⅛-inch, and our only cockled bobbins came from creased rolls.

◆ ◆

WE invite our readers to make use of this department for the discussion of any and all problems arising in the mill or finishing plant. Questions, answers or letters need not conform to any particular style and will be properly edited before publishing. The editors do not hold themselves responsible for any statement of opinion or fact which may appear in this department unless so endorsed. This department is open to all.

◆ ◆

My next experience with this self-weighted cast iron roll was on 1-1/16-inch cotton, spinning carded 30s and 40s. On the frames in this mill we set the front and middle rolls, top and bottom, as close as the stands and cap bars allowed, giving a setting from bite to bite of 1-inch. This arrangement gave good drafting conditions as long as we kept our staple uniform.

It was in this mill the writer learned the limits in satisfactory performance of this self-weighted cast iron middle top roll. Such a roll, depending upon the gauge of the frame of course, weighs about 4,000 grains. The Hinds roll averages in the neighborhood of 1,700 grains, and the Washburn roll can be had in practically any weight above about 900 grains. That means that by use of the Hinds roll a closer setting from bite to bite can be used, without danger of cockling the fiber, than with the cast iron roll, and with the Washburn roll the setting can be even closer than with the Hinds.

With the cast iron self-weighted top middle roll on 3-roll spinning, it is my experience that a slightly longer staple, say 1/32-inch to 1/16-inch, than that for which the rolls are set will give little if any trouble by cockling the yarn. When the staple for which the rolls were set was exceeded by more than this we had cockled yarn. But we encountered the most trouble with the staple running shorter than average. Whenever any considerable part of the stock was shorter than 1-inch, around the bottom middle roll the roving would go, and the trouble with these "lap-ups" was many times greater than the occasional bobbin of cockled yarn. It must be considered that the roving from carded stock doesn't have the uniform fiber length that is found in combed roving.

It is all a question of slip-drafting and proper control of the fibers. The lighter the middle top roll the shorter the practical setting, the more the slip-drafting under the light top roll, and thus the better controlling of the fibers being drafted.

The question might be asked: Why should there be more "lap-ups" on the bottom middle roll where

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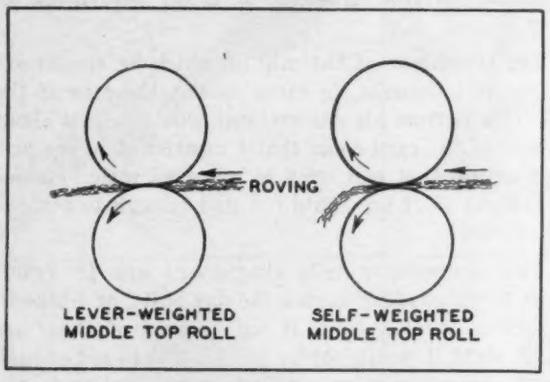
the top roll is self-weighted than where it is lever-weighted?

The accompanying sketch explains the writer's idea of what happens to the roving under each condition. Because the lever-weighted cot spreads to some extent, the actual setting between the rolls is shorter than between the theoretical bites. Also, as shown, the lever weighted roll will deliver broken or stretched roving nearer the front roll than will the self-weighted roll.

On regular 3-roll spinning the front steel roll is 1-inch diameter and the second steel roll 7/8-inch.



Showing what happens to fiber when stretched or broken between front and second rolls because of excessive short fiber in the stock . .

Unless the roller necks and stands are in perfect condition, as much as 1/16-inch must be left between the bosses of the rolls, so that from bite to bite the rolls cannot be set closer than 1 inch. What will be the result when 7/8-inch cotton is run under a self-weighted middle top roll with the bite of the front roll 1-inch away?

It has been my experience that on cotton 1-inch and shorter the self-weighted middle top roll did not produce as even spinning, breaking strength not as good, and consequently we had more ends down.

The writer's experience leads him to the following conclusions with respect to 3-roll spinning: A mill using full 1-1/32-inch cotton and longer should run a self-weighted middle top roll, preferably one light enough for the staple and weight of stock to allow "jamming up" the stands and cap bars, thus getting from the equipment the maximum in fiber control. A mill on shorter than full 1-1/32-inch cotton will get best results, year in and year out, with the middle top roll weighted.

Only the staple of the cotton has been discussed here. The character hasn't been mentioned, and to go into details regarding the drafting of different varieties of cotton would make this discussion entirely too long and too involved.

The words of warning, then, are these: Superintendents of mills on printcloth, sheeting, etc., now using 1-1/32-inch cotton may get satisfactory results for a while with self-weighted middle top rolls on their present spinning. But there are two very variable factors to be considered: The kind of cotton that will be available from an economical and practical standpoint, for making the same goods next year, and the treasurer's idea of what cotton the mill should use.

If the self-weighted middle top roll is to be used on the shorter staples, the bottom and top middle rolls should be turned down to about 5/8-inch, stands and cap bars planed off as much as practical, so that a setting of at least 7/8-inch can be obtained. But the best thing to do is to equip the frames with drafting equipment developed for the purpose of close settings and good fiber control.

In conclusion, the writer's experience has been entirely on sales yarns, where attention to better drafting rather than long drafting took precedence. He kept his drafts 12.5 and shorter. And he believes the advantages gained by improved quality, increased production, and less waste, made possible by better drafting, exceed the savings effected by stopping a little preparatory machinery and using longer spinning drafts.

I would like very much to read the experience of others along the lines discussed, and would appreciate some definite data in the way of breaking strength, ends down, etc., which I am not at present in position to furnish. CONTRIBUTOR No. 6193.

A Question about Carding Cotton on Woolen System

Readers with experience are invited to give their ideas on this problem . . . . . .

EDITOR COTTON:

I am having a trouble that I think some readers of COTTON can help me to remedy, and I am very anxious to receive some help. We are running two mixtures; one is two-thirds India, one-third American; and one is one-half China, one-half American cotton. We are running this stock on wool cards and are having trouble with bunches or slugs in the yarn. We make a filling yarn, sizing 2¾s and run both white and colors. We twist the yarn direct from jack spools and do not use a core. Our cards are equipped with tape condensers, ¾-inch tapes, 4 spools, 18 ends to a spool, and the cylinder and rolls are covered by a wooden bonnet that extends from the breast to the doffer. The card room is equipped with humidifiers. The bunches in the yarn are from ½-inch long to 2 inches long and are quite bulky. They sometimes appear with regularity and sometimes vary both in space and ends. Pulling the bunches apart shows them to be short fiber that is practically fly.

We have tried all kinds of schemes to eliminate our trouble, and seem to be just as far away now as we were three years ago. In conversation with some carders, their attitude seems to be that a card system of this type will always cause this trouble, but it would seem as though some of COTTON'S readers must have fought this thing with the idea of eliminating it, and I would like their ideas. It would be well for the "can't fix it" fellows to write their ideas telling us why, as well as for the "can fix it" fellows to tell us how; because this is a serious trouble and must be eliminated.

What is the main source or cause of this trouble?

Do the bonnets hold fly and then drop it? Should they be set higher off of the rolls? Should they be wiped off inside, and how often? Would a dull fancy or an improperly set fancy cause this? Would any trouble with the rubbing aprons or tapes cause it? Do you think it would be the stock that would cause it?

CONTRIBUTOR No. 6186.

Prefers Plain Spindle to Clutch Type

EDITOR COTTON:

I have been reading with interest the new series of articles by YOUNG TIMER in the "HOW OTHER MEN MANAGE" department, and noted with especial interest that in his November article, page 58, he brought up the subject of clutch spindles. I have also read the reply made to him by "CONTRIBUTOR No. 6177," page 66 December COTTON, and agree with this latter man when he says that if the plain spindle is of the proper weight and taper there would be little trouble with the bobbins rising on the spindle.

We have recently changed over some warp frames from clutch spindles to plain spindles and have been able to increase speeds as well as having practically eliminated all bad work due to the bobbins rising on the spindle.

The advantage of the clutch is that the bobbins will all stand at a uniform level on the spindles, giving completely filled bobbins, and on filling bobbins used on feeler looms a properly located feeler bunch. Another advantage is that a longer traverse may be obtained. This means more yarn on the bobbin with its subsequent advantages.

So much for the advantages; now for some of the disadvantages of the clutch spindle.

No standard make clutch in my knowledge at the present time will hold the bobbin true on the spindle, due to the fact that to hold the bobbin true each segment of the clutch would have to exert exactly the same amount of pressure on the inside of the bobbin.

The eccentricity of the bobbin on the spindle caused by this unevenness of the pressure of the segments causes the spindle and bobbin to vibrate, especially at high speed. This will work the bobbin up on the spindle, causing bad work.

A vibrating spindle will also throw the oil out of the base and will eventually run hot and wear out the bolster.

Another disadvantage of the clutch type spindle is that when a spinner stops the bobbin to put up an end the spindle will continue to revolve inside the bobbin to some extent and act as a ream, gradually cutting out the inside of the butt of the bobbin. This reaming effect will soon enlarge the bore of the bobbin until it will be about impossible to hold it down on the spindle. New bobbins must then be bought.

The repairs on a plain spindle are practically nothing. The repairs on a clutch spindle are incessant.

It is obvious from the foregoing that unless the spindle speeds are moderately low, in my opinion, the disadvantages of the clutch spindle as now manufactured more than offset their advantages.

CONTRIBUTOR No. 6196.

More on Using Male Help at Night

EDITOR COTTON:

I would like to make just a few remarks concerning the article by "CONTRIBUTOR No. 6086" on page 55 of the November issue of COTTON. You will recall that this contributor had a letter on page 74 of the June 1932 issue with regard to running the night shift in a mill with male help only. There were some things about that article that I did not understand and so I asked him some questions in a letter on page 57 of the September issue, and this article from him in November COTTON is in answer to my September inquiry.

The conditions at the mill of which he speaks are just what I thought, in other words, the size of the mill (this is from his description) would be just about the size of the card room that I mentioned in my previous article that had tried to adopt all male help for their night shift but could not find enough to put the idea through.

This contributor tells that there are 19 frame hands in the carding during the day shift, or I take it, 38 frames in all. Now, if only a part of these are run at night it would not be any trouble to get enough men to run this room, and the same applies to the spinning.

At the mill of which I spoke in the note in September, we had on the card room payroll just 150 hands days, and the night shift was using 75 hands at the time the idea was tried. It can be seen therefore that this is quite some different from the condition that our friend had.

I asked whether the day overseer on his job was also the night overseer, not that I would have been surprised if this was the case, because I believe that most mills that have a night shift have the day overseer operate as night overseer also. The idea I had in mind was that if the same man had charge of both shifts, why should he let the night help, which we are told were "green" boys, beat the day shift when he (the overseer) was around his room during the day?

Well, anyway, I am glad that "CONTRIBUTOR No. 6086" explained the situation, and I feel that everything except one point is clear. I will mention this later.

I cannot agree with "CONTRIBUTOR No. 6086" on the question of girls versus boys. I believe that women make better speeder tenders (fine) and spinners than men. I think that as a rule women are cleaner about their work, or this is certainly the case at our mill, anyhow. "CONTRIBUTOR No. 6086" says the green boys have been at the jobs of spooling, warping, spinning, etc., two years and are qualified as experienced hands. I would say some, maybe, but in my mind it takes more than two years to make what we call real hands at our mill.

Now, in regard to no waste being made, that is no roving waste, "CONTRIBUTOR No. 6086" says that this is as easy as *a b c*. All you have to do is to let the bobbins run out in the frame. Now, as I said before, I don't doubt this at all, but if all mills were run under the same conditions, the bobbin machine people

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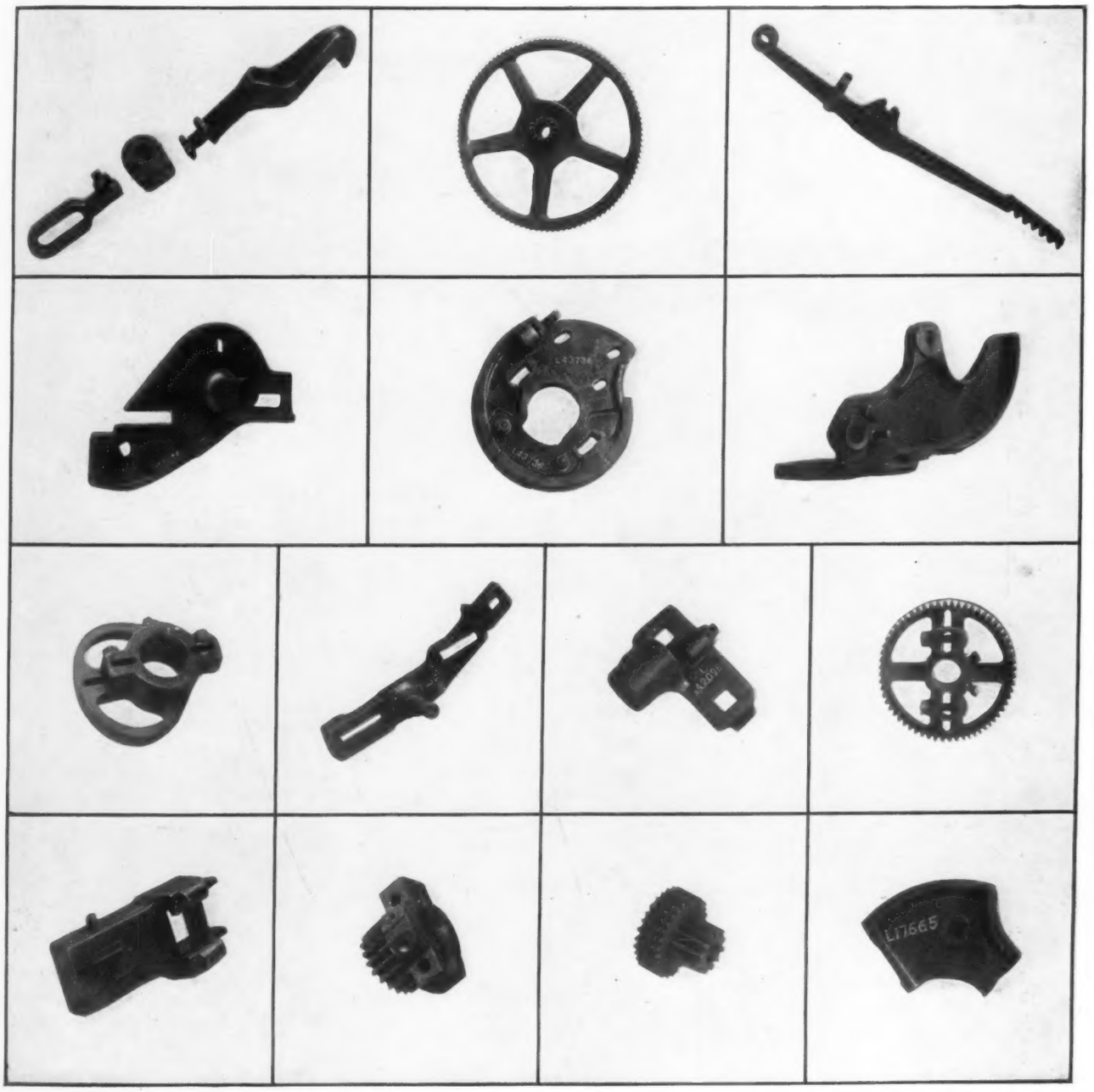

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would have to go out of business. I think that this is quite some trick and at any of the mills where I have ever been I have failed to find any that do not make waste in creeling. It is some job when you are making work for 60s yarn, but it may be still more when you are making 8s to 18s yarn. Some of our best speeder tenders on 1.60-hank have to stop their frames even under the system we use and this is to allow the bobbins to be taken out on the last half lay. We are using a Termaco bobbin cleaner and I think we shall continue doing this.

CONTRIBUTOR NO. 6136

The Job of the Master Mechanic

EDITOR COTTON:

What is the master mechanic's job around the cotton mill? Is his job a responsible one? I wonder if the superintendent and the other overseers really know what this man's job really is? Maybe he hasn't much of a job after all. There is the boss spinner and the boss carder and the cloth and weave room overseers. They have got their rooms to run, then what has he got to do; has he got anything to do with these rooms?

Well, let's see. The master mechanic comes in early each morning and gives the boys a "Good morning" and "How do you feel?"—gets a smile and a greeting in return. The whistle blows, then the usual routine of placing the boys on the various jobs. Things seem to be going on this morning with a hum. Here comes someone from the weave room—a fuse blown out. Someone failed to throw the switch completely in, or a bad fuse clip was the cause. Anyhow, 18 or 20 looms are stopped and losing production. There goes Bill to replace the fuse.

Then here comes the slasher helper running in. There is a gasket blown on No. 1 slasher (there should have been a good asbestos gasket or a ground joint union).

Just caught up, looking good now and smiling, when someone brings in a gear with the teeth stripped out and wants to know when it will be ready as they are behind on that machine now.

"Say", somebody yells, "better come upstairs and look at No. 3 motor; think she's got a bearing gone." Everyone busy now and trying to get things going again.

Then some mother's little boy wants to know "Where is Mr. Blank?" "What's the matter, son?" "Mother said tell you that the sewer back of our house is stopped up, and that Willie broke out two window lights last night, and wants to know if you have any door knobs."

A phone call from town, the truck driver wants to know if this or that will do, "they haven't got just what you ordered."

Smiling again . . . "Hey, where's the chief? There is a bearing out on No. 1 line shaft."

These are just a few of the many things on the master mechanic's job. Many of these things never happen if the master mechanic is on the job and has a well trained crew of men. There are so many small things, which if corrected in time, will prevent shutdowns and loss of time. You will often see the master mechanic walking around through the plant and looking around for small things, not waiting until they show up and shut some machine down. He will see many things that others will not notice because he is trained and is still training himself for his job.

The writer has had an experience of this kind, and has cut it to a minimum. He has a well trained crew of men, men that you like to tell the other fellow about. By careful training and working they don't have to be told about the little things, they are ones that you can depend upon to do the job and to do it right without having to be there yourself.

The master mechanic is a spoke that is fitted very securely in the wheel, and when it gets loose the whole thing gets loose. The whole thing depends on him. He has a very important part to play if the plant is kept running. If the master mechanic expects to hold his job and do justice for his company, he must always study his job and train himself and other men to be proficient for their jobs.

The master mechanic is a cog that never stops. He is always on the job. When the whistle blows at stopping time in the evening and all is quiet, you will oftentimes find the master mechanic and one of his men somewhere in the plant repairing some machine or doing some job to keep the wheel turning. He could have done the job during the day by shutting down the machinery, but it is his job to see that all machinery is kept going to keep the production of the plant at the top. Saturday and Sunday comes and everybody else is out riding or sitting around the house, but the master mechanic is out in the boiler room with his head in the fire door keeping things in shape.

The master mechanic is a very important spoke in the wheel. He not only has one room to look after but has the entire plant. He has many motors to look after, hundreds of electric switches to keep in good shape. The writer has a record of each switch, when it was last inspected, condition of contacts, condition of oil, when the oil was changed, what was done to each switch when last inspected; these inspections are made at a set date.

And then there are the water lines, the steam lines, thousands of feet of each one—he must know each foot of his water mains and steam lines.

Most mills in the South have a village of their own to be looked after.

The master mechanic must know his job and have his men trained to do the best work. He must have a stock of extra parts to do all repair jobs so that this work can be done within a limited time. He must, if possible, catch these jobs before they cause a shut-down and a loss of production.

Then there is the shop, the making of gears and welding, etc. There are many jobs brought to the attention of the superintendent, but there are thousands that are not. There are so many that do not give the master mechanic his due. He may be greasy and have a black smudge under his eye and may not be so good looking, but, as I have said, he is a very important spoke in the great wheels of industry.

I read Dunhill Marsden's article on "Organization" in COTTON. I think it is a good sermon and a truthful one, and I hope that he will some day put one of his sermons in each issue of COTTON. After reading Mr. Marsden's sermon I must say a little something else. At this plant we have one of the best superintendents in the country. He is a man of the highest intelligence, a Christian gentleman, a man who loves his people, always has a pleasant good morning for every one; and he is one of the best Sunday School teachers in the South. Wouldn't it be great if each organization had a man of this type as superintendent? He has one of the best organizations possible. His overseers cooperate with him and he with them. They are organized: the foremen know how to run their jobs without having to have the superintendent there pointing things out to them. The foremen have their help organized so that they know their jobs and run them.

I would like to see an article in each issue of COTTON from the master mechanics, their ideas on the up-keep and maintenance of their plants. I am sure that we all get a great deal of help from such discussions.

CONTRIBUTOR NO. 6198.

A Method of Slashing Crepe Yarn

Other methods will be published later. Let us have yours . . . . . .

EDITOR COTTON:

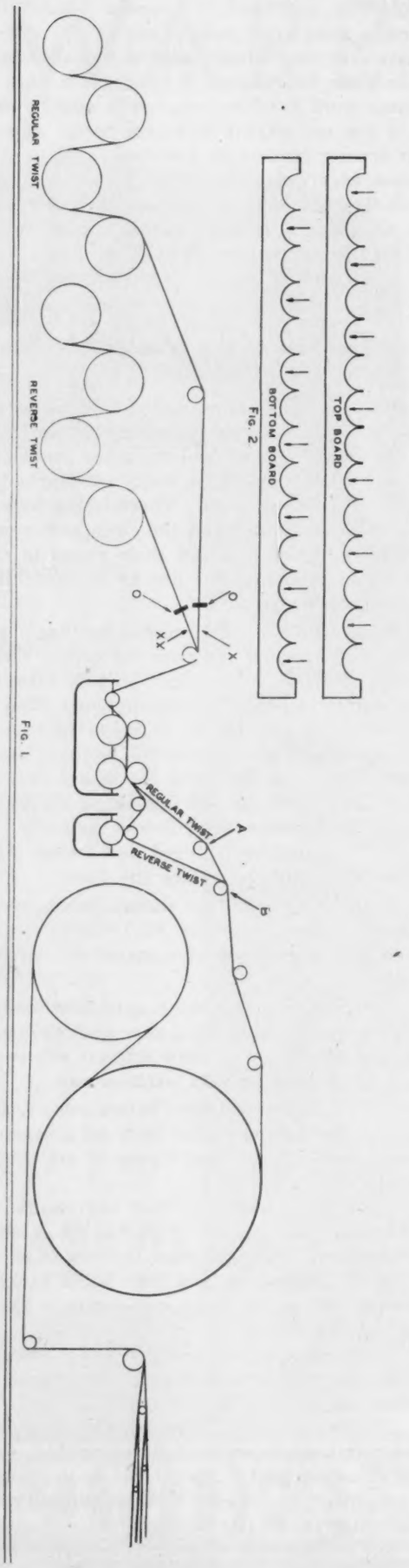
Discussion of methods of sizing crepe yarn on the slasher to prevent the yarn from rolling and taping and breaking at the lease rods was requested by "CONTRIBUTOR NO. 6167" in his letter on page 63 of your January issue. This man said he runs 1,534 ends of reverse twist 80s/2 and 1,534 ends of regular twist 80s/2; twist-on-twist with 60 turns of twist to the inch.

I would warp the reverse twist yarn 384 ends on 3 section beams and 382 ends on one section beam, taking care of the total of 1,534 ends, and I would warp the regular yarn in the same way. I would bring these beams to the slasher room and set them in the beam stand as shown in the accompanying illustration. Then I would proceed as follows:

Threading Up the Yarn.

Tie all of the regular twist yarn to one leader, and all of the reverse twist yarn to another leader; *both* leaders going under the immersion roll, and over both copper rolls, and then splitting. Then the regular yarn leader goes over a roll which is set *over* the secondary size box with the tint and size mixed (hot *tint* water and a little size added to it). The regular twist yarn goes over roll *A*; and the reverse yarn leader goes over the copper roll, under a third squeeze roll of the secondary box and joins the regular twist at roll *B*. (The main thing is never leave the yarn free anywhere for more than 24 to 28 inches. Freedom gives the yarn a chance to roll.)

After the yarns are tied to leaders, start the machine and run a yard or two just to tighten up all yarn



Method of Slashing Crepe Yarn Described by "Contributor No. 6169".

evenly. Put a comb in the regular yarn at *X*, and another comb in the reverse yarn at *XX*. If no long combs are available, put a glued tape on each side of the yarn layer. Start the machine up until you get the combs or tapes between the squeeze rolls.

Now you can fill the large box with size up to the center of the copper rolls. This size is 25 per cent or less regular size and the balance is water. (*Never* boil this mixture in the box while the machine is running, but keep it just below the boiling point.)

While the boxes are being filled, put strings in between the yarn from each beam, with the last string between the layers of the regular and reverse yarns. This last tape will be replaced with the large split rod in the front.

When the strings are in, run them through dry. Do not put the immersion or squeeze roll down yet.

Now, when all of the strings are through the rolls, stop the machine and put tapers on. What I call a taper is a 1½ x 4-inch hardwood board as long as the section beam stands are wide. This board is cut so that it will draw the yarn together and not roll it, as shown in the sketch, Fig. 2.

This is the main secret about sizing this kind of yarn, and another point is that where the yarn leaves the size boxes, it has to go over and under three rolls before it strikes the large drying cylinder. These two things will keep the yarn from rolling.

Two of these tapers are used, being tied to some stands and regulated as shown at *O* in Fig. 1. Then, the immersion roll is dropped down so the *yarn* will be about 1 or 2 inches deep in the size, and the squeeze rolls dropped in both boxes and the machine started.

Regulating the Taper Boards.

The cut-out portions of the tapers should be regulated so that the ribbons of reverse yarn (which is run over the lower taper) will not be directly under the ribbons of the regular yarn (which is run over the upper taper). This is accomplished by staggering the yarn in cut-out portions of the two taper boards, as indicated in Fig. 2. It will be noticed that I have drawn in arrows showing which cut-out portions of each board each yarn should be put in, so the ribbons do not come directly above and below each other.

The remainder of the operation is easy. Most important is the secondary size box to tint the reverse *or* the regular twist yarns, to prevent their becoming mixed in the cloth. The next important thing is the tapers. I prefer less cut-outs for work like that of your contributor—6 or 8 cut-outs will be enough. These cut-outs must be polished smooth.

The next important thing is the rolls. They can be wooden, or wood covered with tin, or copper pipes, but they must revolve.

In conclusion, I might offer a few suggestions. Before stopping for counting the yarn in the comb, wash off the yarn good after lifting the squeeze rolls. Do not disturb the yarn much when washing off. Make certain that the beams are filled up straight, without any loose ends at the selvages. Clean out the secondary box every week, as there will be a lot of sediment in it—every three days would be better.

CONTRIBUTOR No. 6169.

TRIPLE DUTY!

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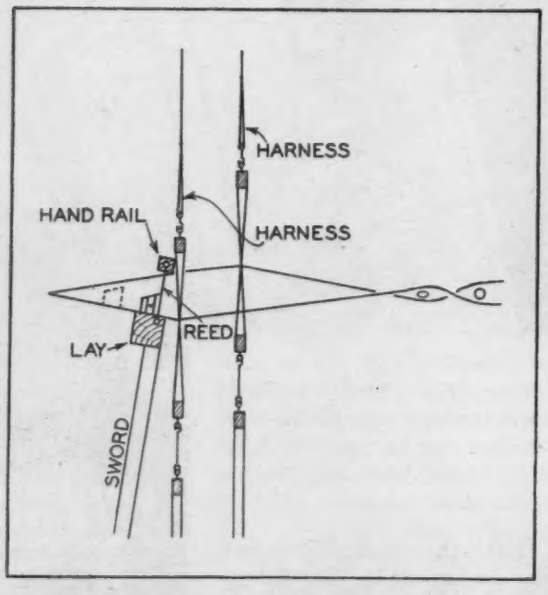
The Low Front Wall Shuttle

In view of a number of discussions recently, in meetings and elsewhere, with regard to shuttles with the front wall lower than the back wall, an explanation of the construction of this shuttle and the reasons for this construction will be of interest.

In discussing the low front wall shuttle, it should be borne in mind that the wall or side referred to is the one nearest the front of the loom.

Shuttles of this type are usually made with the front wall 1/16-inch lower than the back. A great many people are under the impression that in making the front wall 1/16-inch lower, that 1/32-inch is taken off of the top and 1/32-inch off of the bottom of the front wall or side. This is not correct, as the 1/16-inch is all taken off of the top of the front wall. In other words, the bottom of the shuttle rests flat on the lay and the relation of the plane of the lay and of the two walls of the shuttle at the bottom is not disturbed.

The reason for taking 1/16-inch off of the top of the front wall is to have the shape of the top of the



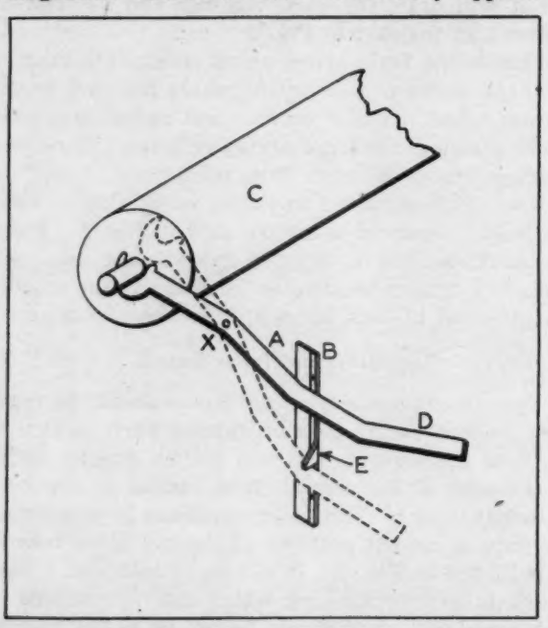
shuttle conform more nearly to the incline of the top shed of the warp. The accompanying rough sketch shows that the reed and the bottom and top sheds form a triangle with the apex of the triangle at the fell of the cloth. The greatest strain on the warp in weaving comes when the harnesses are opened to form the top and bottom sheds to allow the passage of the shuttle. It is always desirable to have as small a shed opening as possible, for this reason. Most types of looms pick from the top center, therefore, the shuttle enters the shed before the shed is completely open. In doing this, of course, the point of entrance of the shuttle is near the fell of the cloth, and by having the angle from the back wall of the shuttle to the front wall conform more nearly to the shed opening, it is possible to run the loom with a minimum shed opening. Since the front wall is lower, the shuttle does not chafe the warp on the top shed as badly as it would if the front wall had the same height as the back wall. The outline of the shuttle in dotted line shows more clearly the advantage gained by the inclined top on the shuttle when the lay is in a more forward position.

Lifting Device for Slasher Squeeze Rolls.

EDITOR COTTON:

Mill men who operate slashers know something of the difficulty experienced in lifting squeeze rolls. Squeeze rolls have to be raised if the slasher is left to stand idle for many hours, to prevent the roll from making a hard streak across the warp. Leaving the roll on the yarn too long also prevents the roll from further squeezing the warp properly, because of the flattening of the woolen cloth where the roll rests. Squeeze rolls are very heavy, and ordinarily they are hard to lift, especially so because of the short journals to which one has to hold while raising them.

The accompanying sketch shows a simple but novel arrangement which has been successfully applied to



slashers and has proven a great help to operators in this connection.

In the sketch, *A* represents the hand lever, which is pivoted on the stud *X*. By simply pushing the handle *D* downward the roll, *C*, is lifted. *B* is the latch which holds the roll up by catching at the point marked *E*.

By using this device, the operator can easily raise either or both ends of a roll without the aid of anyone. Since there is considerable play in the slot where the journal of the roll runs, one side of the roll can be raised at a time without any disadvantages.

The writer is certain that a great many minor accidents have been due to operatives attempting to lift these heavy rolls unaided, resulting in bruises, burns, etc. This alone is worth many times the cost of making the lifts. They can be made in the machine shop of any mill, the only main cost being that of material.

M. R. H. (N. C.)

Says Back Off the Doffer When Grinding Cards

EDITOR COTTON:

The question as to whether or not to draw off the doffer before grinding cards has been debated more or less in COTTON during the past year, and as far as I can learn the answer is and shall be as it was before the question came up. On page 87 of the May issue, "C. R. D. (N. C.)" had a letter on this subject in which he criticized a man who did not approve of this idea. I notice that "U. M. (N. C.)" on page 109 of the October issue expressed himself as agreeing with "C. R. D." to the effect that the backing off of the doffer to a full gauge for grinding is a good precautionary measure with many first-class card grinders, and that it is even compulsory with a good many card room overseers.

At mills where it has been the practice to draw off the doffer before grinding, it will be the same in the future, and on the other hand those who deem it not necessary will continue to grind without going to the trouble of drawing it off.

Some mills have a certain system about doing things that must be followed to the letter, and let me say here that at our mills it has been and shall be the practice to draw off the doffer before grinding.

Where one mill employs a certain system for doing things another mill may do just the opposite, but this is the way of the mill game, and in many cases just a matter of opinion, and one reason why I believe that the "HOW OTHER MEN MANAGE" department of COTTON is of so much value to all mill men and a wonderful place to express our ideas.

Quite often we will find mills doing things in a certain way, and why? Because the men before them used the same system, and it became a custom that they should follow in all these steps. But there are times, and more so now with the present conditions, that a new idea arises and after being tried the old ideas are soon forgotten and things that may have seemed foolish a few years back are just the thing today.

I will give a good example of this: A certain mill running on carded work, coarse numbers, had a set rule for the length of time that the grinding wheel should be left on a card. Sometime ago the overseer of carding at this mill read an article that one of your contributors to COTTON had written about leaving the grinding wheels on until the flats had made one complete round, then grinding the next, and so on. Well, this overseer thought that sounded logical and decided to give it a trial. The outcome was that this mill is now using this method of grinding entirely.

Now, in regard to drawing off the doffer before grinding, I had the pleasure recently of talking with at least five carders (and some are old timers) in my neighborhood and all five along with myself are 100 per cent in favor of drawing off.

It seems to me that you have got to set the doffer after grinding anyway, and not being a very difficult place to get at, it is much safer and wiser to draw the doffer off before grinding.

LITTLE ROCK

IN 1722, his excellency the French governor of Louisiana sent one Bernard de la Harpe to locate trading post sites on the numerous rivers which threaded his extensive province. Among these was the Arkansas, and 180 miles from its mouth de la Harpe established a post which he called La Petite Roche, the little rock . . .

In 1803, all the vast Louisiana Territory became the property of the United States; and English-speaking soldiers followed the English-speaking trappers and hunters who had already filtered into the Arkansas country. Pioneer families from the Carolinas, Virginia, Kentucky and Tennessee came hard on their heels . . .

In 1819, Arkansas was a territory; in 1836 a state—with de la Harpe's petite roche, Little Rock, as its capital.

It was the choice of wisdom. Little Rock is situated only 12 miles from the geographical center of the state. It was predestined to become the focal point of Arkansas' rail and highway systems, the center of the state's political, financial, industrial and commercial life.

The region it serves is richly diversified. Its natural resources include timber and minerals and a wide variety of agricultural products and the development of its natural gas, coal and hydro-electric power is attracting the increasing interest of industry.

But cotton predominates, as it has from the beginning. The fleecy staple has influenced not only the agricultural and commercial development of Arkansas but its social and political history as well. Arkansas cotton is known the world over, and that which is produced in the valleys of the Arkansas and White Rivers is of such excellent quality and unsurpassed character that it has commanded a premium for the past three generations.

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I don't believe there is any argument on this question as both sides are right. It is not necessary to draw off if the grinder or overseer that favors not drawing off feels that it takes too much time to do so. All I can say is that some day they may regret it. In the meantime, at our mill and at plenty of others, we shall draw our doffers off *a full gauge* before grinding.

CONTRIBUTOR NO. 6195.

Preventing Defects in Picker Laps.

Even if you know all of these things, it will help you to go over them again . . . . . .

EDITOR COTTON:

There are a number of places in a cotton picker where the defect which causes thin places in laps may be located, but it is found usually to consist in wrong setting of some of the working parts, wrong ratio of speed between some of the moving parts, need of repairs, or quite frequently carelessness in operation or cleaning, more especially in the cleaning of the flues which conduct the dust from the pickers to the dust house.

When a picker is making uneven laps and it cannot be readily seen what is wrong, a very good plan is to begin at the feed and watch the passage of the cotton to the delivery end of the machine, making note of all the places at which the trouble might be found, and examining those places to see that everything is as it should be. In this way things are sometimes found that might otherwise be overlooked.

If the picker is making thin places in laps, the first thing to be looked into is the apron, or, as sometimes happens by a fault in the construction of a picker, the evener and feed rolls are given a greater surface speed than that at which the apron delivers the laps, and so puts a roller draft at a point where none is needed. This stretching of the laps on the apron may cause thin places that will almost amount to holes after being run through the picker. Thin places are sometimes caused in this way, and can be remedied by making the gears which run the apron one tooth larger.

The next point where bad places may be put in the lap is at the feed rolls, by the plucking of the cotton from between the feed rolls by the beater. A number of things will cause this plucking, the most common being worn bearings at the ends of the rolls, but it is often caused by worn gears on the rolls or gears that are not properly constructed and which cause the rolls to run in a jerky manner. Another thing in connection with the feed rolls that is often overlooked is that the bearing should be so planned that not only are the rolls directly in a vertical line with each other but are set so that they will come together with the flutes of one roll bottoming in the spaces of the other when there is no cotton between them. If the rolls do not mesh in this way they will not have a firm grip on the cotton when medium or heavy laps are being run at the apron.

A beater that has a worn bearing or a dull blade or blades that have been worn or bent so that they do not present a straight striking edge to the cotton may be responsible for bad places in the laps. If the beater is set too close to the feed rolls, with a heavy feed, the rolls will be jarred enough to make thin places in the laps by running unsteadily. A beater that is set too far away from the feed rolls, or a beater that is running too slow, will make both thin and thick places in the lap.

Any projection inside the picker, such as a high grid bar, or a screw between the beater and the cage, may cause an uneven lap.

If the surface of either of the cages has been damaged in any way by being jammed or broken or if dirt or cotton collects in such a way as to prevent the free passage of the air through the meshes of the cages, bad places will occur in the laps at regular distances apart.

Wrong fan speeds and improper regulation of the air currents produced by them are usually a cause of unevenness in laps, and bad places in laps from this cause are hard to remedy except by experimenting until the right combination is found, as there are many things which affect the air currents, such as length and straightness of the flues, height and position of the dust house, etc. But there are rules that can be applied and will work out under almost any conditions.

The fan speed should always be great enough to produce an air current sufficiently strong to carry the small tufts or flakes of cotton in an almost straight line from the point where they are drawn from the beater path to the point where they strike the cages with little or no fluttering or whirling, and they should stay where they strike on the cages until shaken off by the stripping rolls.

If there are any open places at the sides or the top of the pickers they should be blocked and the air drawn by the fans from the back of the picker and from underneath the beater.

The dampers should be set so as to cause the cotton to be spread in an even sheet of uniform thickness on the cages, and also should be regulated, so as to cause the cotton to strike high up on the top cages, as this in no way affects the evenness of the laps, since, if the stock is drawn to the cages in equal amounts, the sheet delivered at the front of the picker will be formed of two layers of practically the same thickness, and when run through the next machine will be liable to split.

Usually the greater the fan speed, within reasonable limits, the smoother and more even the laps, but as one of the main objects of picking machinery is to clean the cotton, in increasing the fan speed the speed of the beater and the setting of the grid bars must be considered.

The loosening of any part which is supposed to be fast to a moving shaft, such as gear, the cages, or the stripping rolls, will cause thin places, but as they will extend across the lap they are readily noticed and fixed without causing much trouble.

Most of the things mentioned would cause both thick and thin places, but have omitted none of them because almost always when a thin place is found in a lap there is a corresponding thick place near it, but

the thick place may not be so noticeable as the thin one. But, if the laps are full of thick and thin places is is very likely that the stripping rail is set too far from the beater, thus allowing some of the cotton to be carried around several times by the beater and then turned loose in lumps. The stripping rail should be set about ¼-inch from the beater.

Some causes of bad selvages: Dirt on grid bars near machine sides; cotton accumulating on stripping plate edges; cotton adhering to the cage end leathers; placing the lap roller very carelessly on the layer of cotton thereby denting the machine sides; finisher lap too wide compared to laps fed; rough machine sides; cotton passing between machine sides and cage ends.

Some causes of laps splitting: Too much weight on lap racks; smooth calender rolls insufficiently weighted; too much soft waste or short fiber in the mixing; damp cotton or atmosphere; oil dropping on the cotton; hopper bale breaker fed with thick layers of cotton; fan draft too strong; unsuitable division of air current at the cages.

CONTRIBUTOR No. 5095.

An Experience With the Roving Tester

EDITOR COTTON:

I would like to report for you our experience with an automatic roving tester. Back in April COTTON, page 45, a member of the Textile Operating Executives of Georgia was reported as saying about this tester, "there are so many things it doesn't show up. You can take an imperfect roving with plenty of twist and it makes a beautiful line; and we have not been able to apply the recommended weights to the roving." This does not do justice to the device, according to our own experience.

We installed a tester over a year ago after a demonstration showed us its merit. Starting at the slubber, we began a systematic check of all our rovings. The carder said we couldn't take any twist out of his rovings or the work would run badly. It turned out that the extra twist he had been using was necessary to hold a badly stretched roving together. Once the causes for the stretching were remedied, it was necessary to take out 13 teeth of twist in order to get a good chart on the testing machine. To do this we re-adjusted the lay and tension gears, slowed the spindles from 700 r.p.m. to 525 r.p.m., and still had a front roll speed of 172 r.p.m. as compared with 165 r.p.m. before the change. So we increased our production, reduced wear and tear with slower frame speeds, and the work ran better.

As soon as this new slubber roving got into our intermediate creels we tested this roving. It showed up hard with a straight line across the chart at 12. It was necessary to take out seven teeth of twist and re-adjust the lay and tension gears before the intermediate roving made a proper line. Here again we reduced our spindle speeds from 945 r.p.m. to 800 r.p.m. but increased the front roll speed slightly by taking out twist.

As this new roving got into our speeder creels we

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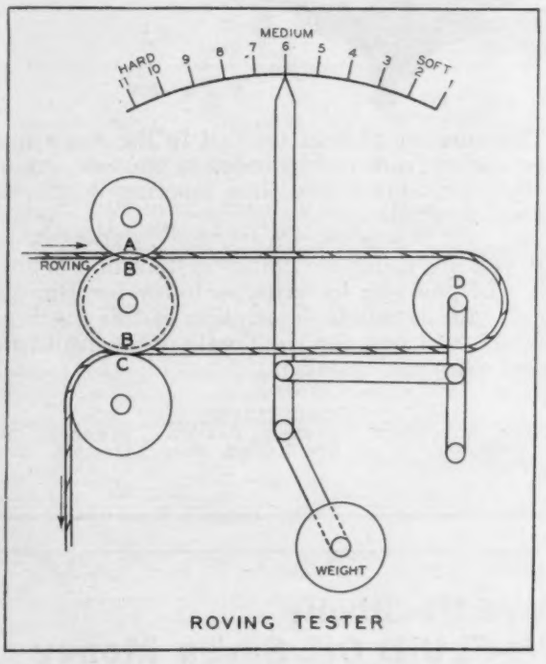
began to get far fewer hard ends which meant reduced roller covering expense. We were able to take out two teeth of twist on the roving frames to get a chart registering between 6 and 8.

This roving was going into 36s on the spinning frame. After completing the roving changes we found 25 per cent less variation in our size and break test and nearly five per cent better breaking strength. This was due to the better drafting possibilities with the softer, even roving.

For the benefit of those who may not be familiar with the roving tester, a brief description might not be out of place. The roving is fed into the machine

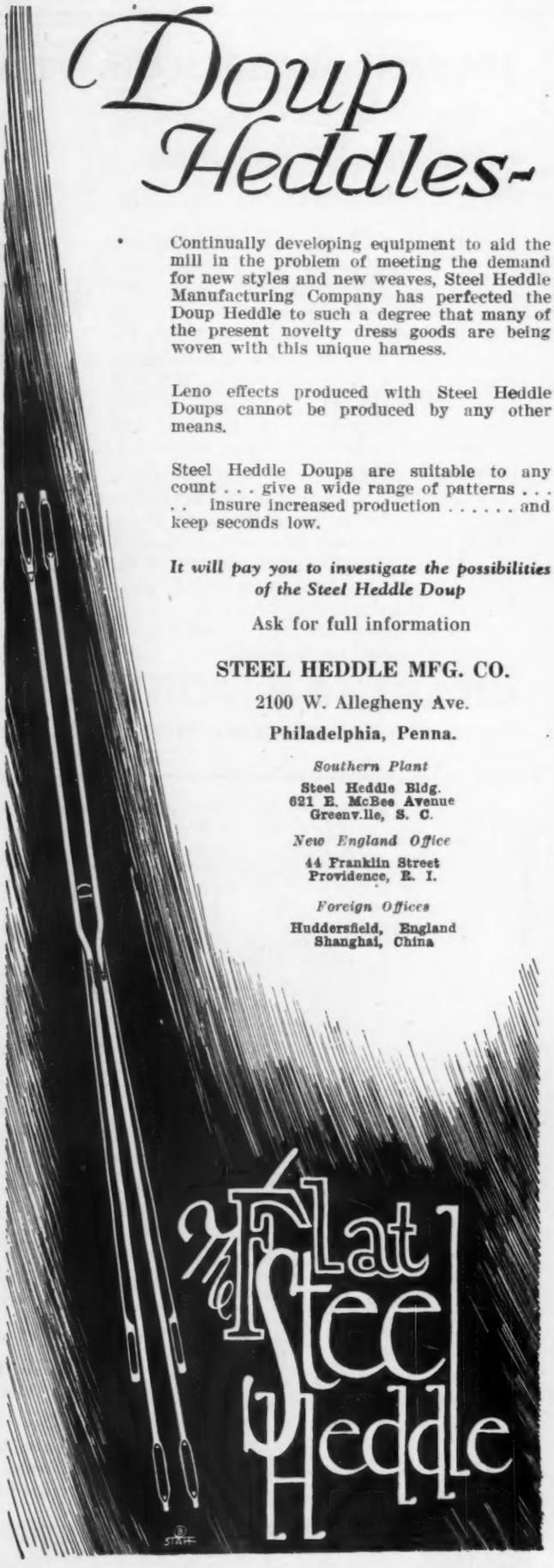


ROVING TESTER

by power-driven rollers *A* and *B* (see sketch) and drawn out of the machine by power-driven rollers *B* and *C* which are of larger diameter than rollers *A* and *B*. Roller *D* merely guides the roving through the machine and turns freely on its spindle. Roller *D* is about 12 inches from rollers *A*, *B*, and *C*. This arrangement gives a small draft on 24 inches of roving.

The weight is arranged to exert a constant tension on the roving while it is being drafted. This tension is transmitted to roller *D* by the arms as shown. With the proper weight on the machine for the hank roving being tested (and a table shows the correct weight to use) and with the roving running continuously through the machine, the pointer will stand around 6 on the scale if the roving is even and has the proper twist. Weak places will be stretched by the weight and the pointer will run down the scale toward *Soft*. In the same manner, hard roving will pull the roller *D* nearer the drafting rollers and the pointer will run up toward *Hard*. A worm and ratchet is provided to prevent the weight from breaking the roving at extremely weak places, but does not prevent hard places from running the pointer quickly up the scale.

A pen is attached to the arm and records the movement of the pointer on a chart. This chart is run automatically under the pen by a separate set of rollers. Even roving with the proper twist registers between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New Machine Gives Mill
100% Higher Production
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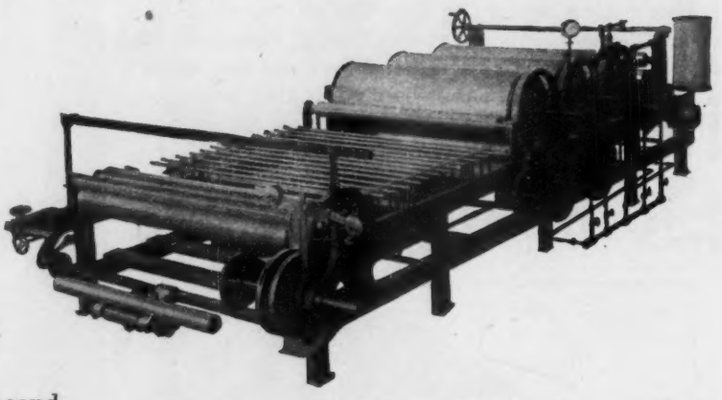
Bulletin C-2



Any number of section beams can be run on this new Johnson Warp Sizer, which is rapidly supplanting the old type cotton slasher. A leading Southern mill, which recently installed one of these sizers, has already purchased a second.

Increased production as high as 100%, especially on acetate yarn, can be secured with this machine. This increase in speed is paralleled by an improvement in quality. Acetate warps may be dried with steam pressures as low as two pounds without sacrificing production. And the manipulation given the yarn passing over and under the five cylinders leaves the warp softer and more pliable.

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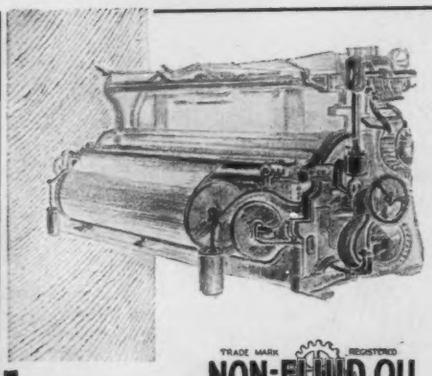

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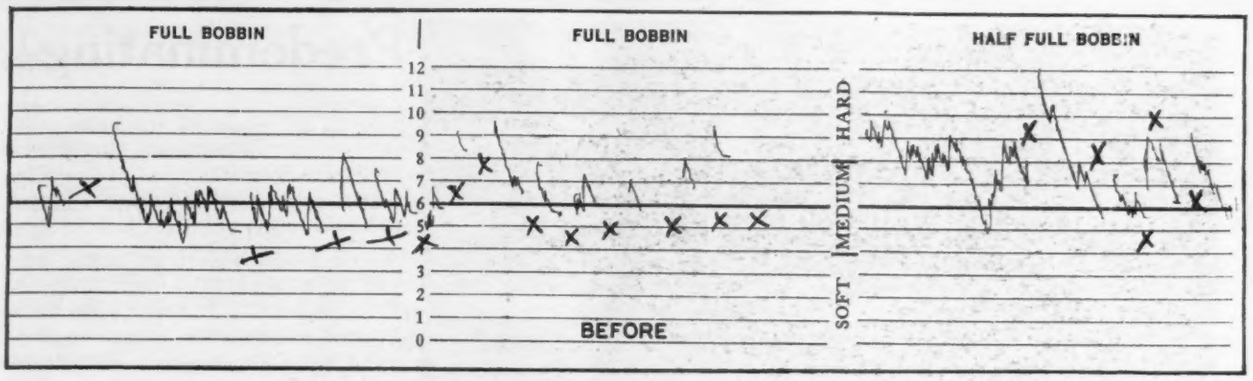


Fig. 1, above: The neighbors' roving looked like this before adjustments.

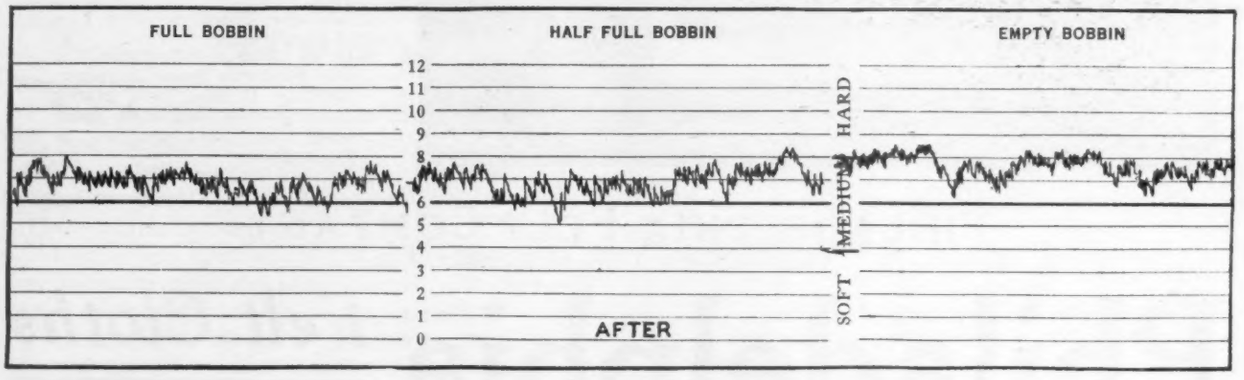


Fig. 2, above: It charted like this after adjustment.

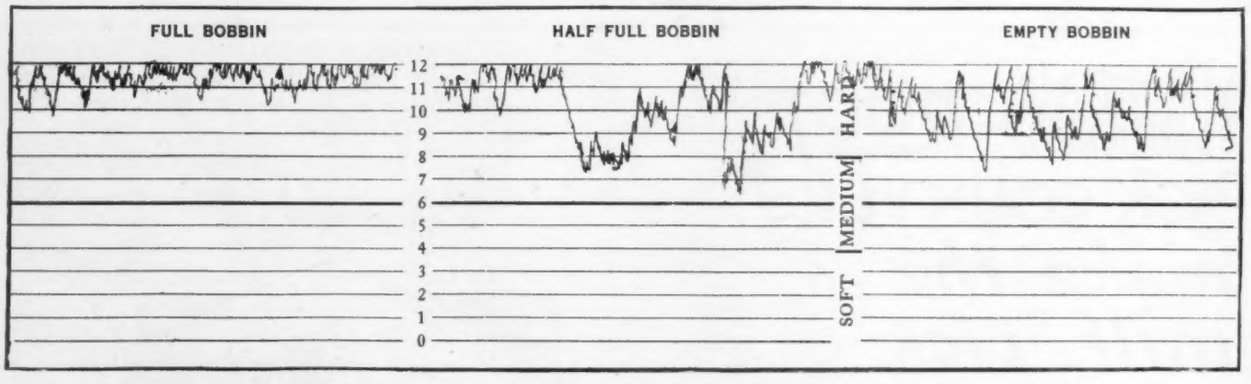


Fig. 3, above: How an imperfect roving with too much twist looks.

three graph lines, as for example 5 and 7 or 4 and 6. Uneven roving will have greater variation in proportion to its unevenness.

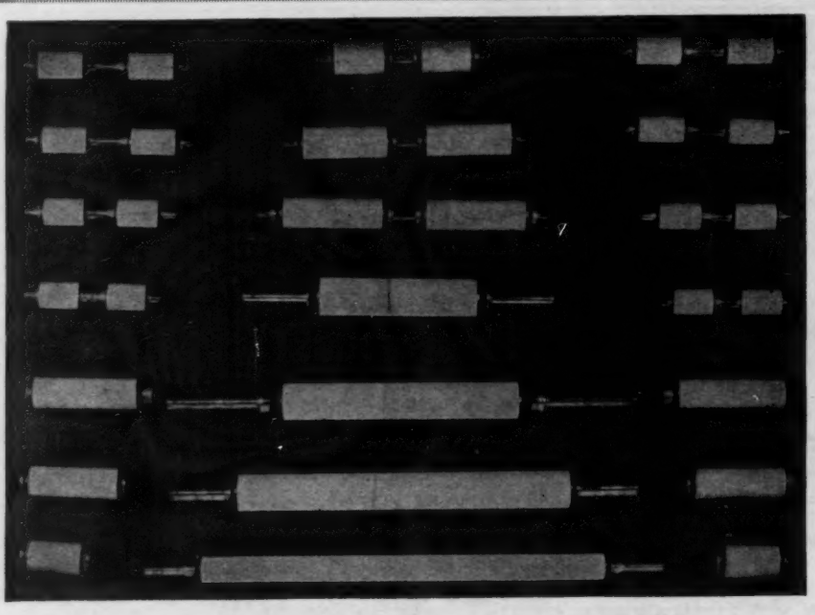
The bobbins of roving are tested at full, half-full, and empty (the last few layers on the bobbin). Should the full bobbin register harder or softer than the empty bobbin it indicates that there is too much tension at the start or finish of the doff. Correct weights are provided for each hank roving to be tested and an extra set of fast running rollers quickly run off the roving so that a bobbin can be tested at full, half-full, and empty in a few minutes.

We now check our rovings regularly every three months—January, April, July and October—and make such changes as the charts indicate. Also, whenever we change roving sizes, cottons, or have some complaint about work running badly. It is against the rule to change twist, lay, or tension gears before testing the roving to see what it needs.

A neighboring superintendent laughed at the idea of testing roving on a machine. "Why," he said, "all you have to do is to run your frames as slack as possible and with as little twist as you can and your roving will be all right." I tested some of his roving made by this seemingly excellent rule and found it so badly stretched it would not even run on the tester long enough to get a chart. Fig. 1 shows how it looked.

After adjusting the lay, tension and twist gears as a series of charts indicated the roving tested showed as shown in Fig. 2, which indicates a very even roving.

Referring again to the report on page 45 of your April issue, I have never seen "an imperfect roving with plenty of twist" which would make a good line. If it has too much twist it will chart a line as shown



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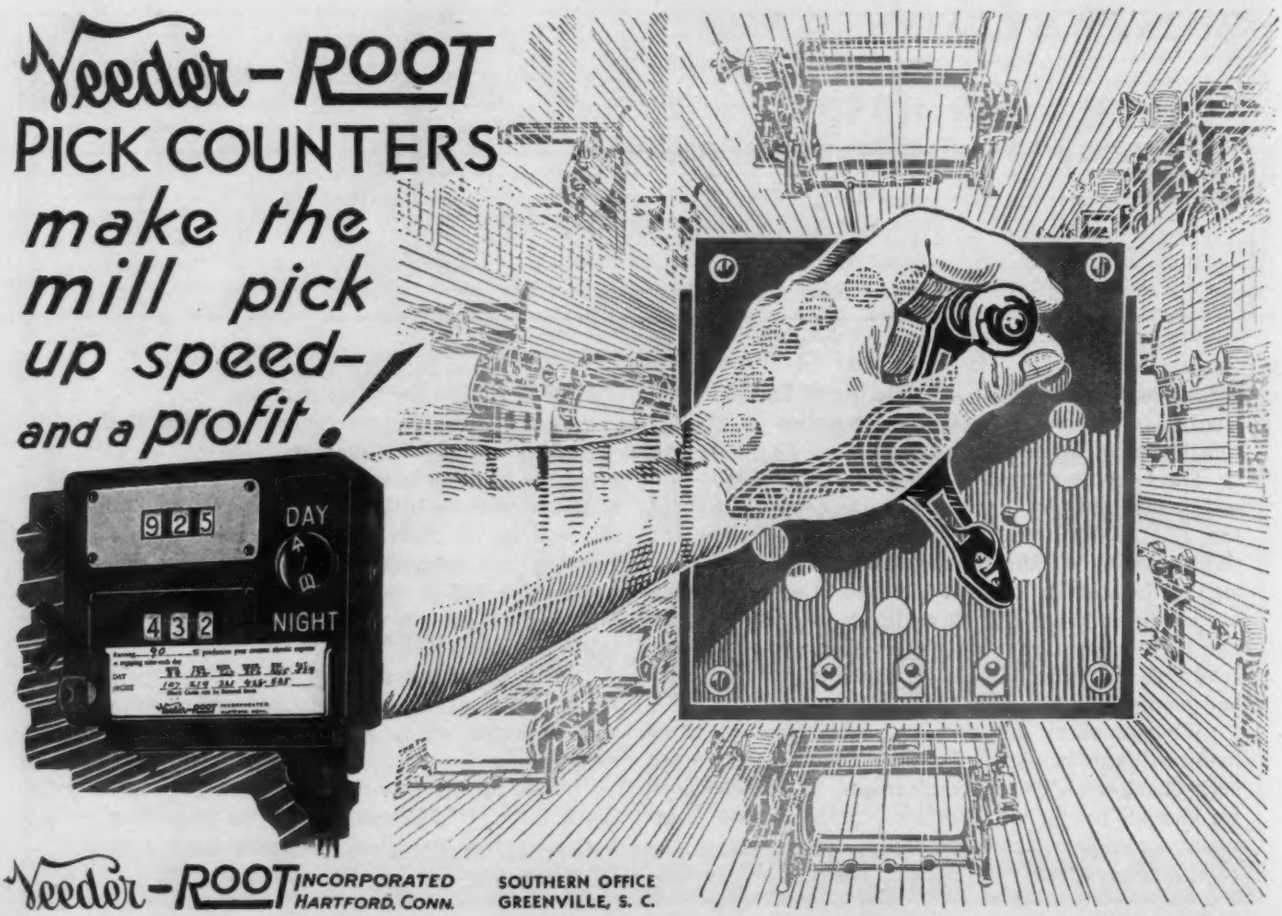

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SOUTHERN OFFICE
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in Fig. 3 for full bobbin. This extra twist is usually to cover up a multitude of sins beneath and it will not spin into good yarn.

If the roving is imperfect it will chart a line as for half and empty bobbins in Fig. 3, indicating the roving is being stretched and will spin a weak uneven yarn.

The easiest way to get a speeder to run well is to put in twist, but the only way to get good even roving is to properly adjust the twist, lay, and tension. And the only way I have found to know when this is accomplished is to run the roving through my automatic roving tester and see what kind of a line it makes. Testing roving by guesswork and by pulling it between the fingers is as out-of-date as the old spinning wheel. CONTRIBUTOR No. 5080.

Figures on Card Waste and Settings

EDITOR COTTON:

Back in the September issue of COTTON, on page 57, you had a discussion on 'Some Card Room Methods" by "CONTRIBUTOR No. 6075". His discussion referred to yarns of from 8s to 40s, made from 1 and 1⅛-inch Middling cotton.

Having had some experience on this same class of work, I have tried and experimented with many settings, speeds, etc., and I think that some of those given by "CONTRIBUTOR No. 6075" are not the best that can be used for this class of work if first-class carding is wanted.

He refers to setting his flats to a 7-gauge. I think this is too close on a 45-inch card, which he specified, because of the deflection on a wide flat. The center will be closer to the cylinder than the ends. This is one reason why 45-inch cards are not being installed more. When carding heavy, using 1-inch and 1⅛-inch Middling cotton and a 16-ounce lap, such as this man says he is doing, if the flats are kept to 7, they are overworked. They are full before they have finished the distance of the bend, and are not doing as much work as they might do on the last part of their working journey. I think that a good speed for flats is 3 inches per minute.

Waste on cards should be about as follows: Card flat strips .0376 per cent; card cylinder strips, .0049 per cent; and card fly, .0221 per cent—total card waste, .0646 per cent.

I believe that a good way to follow this up is to have the grinder, perhaps once in two weeks, take the Thompson rolls off of one row of cards and let the strips fall on the doffer bonnet. Then examine the strips to see if all the cards are doing the same amount of carding. By walking up and down the row, one can look at each card closely and make comparisons. It is very easy to pick out cards that are not set correctly. The front plates may be closer on one day than on another. Pull the droppings out and examine them. By this the back settings can be checked.

The practice of stripping every other card I believe is especially good, particularly when the sliver is going into carded work and misses the doublings of the sliver, ribbon lap and combers, but I do not agree that twice in one day is often enough to strip cards. That is the schedule given by your September contributor. I have found that the cylinder is pretty well

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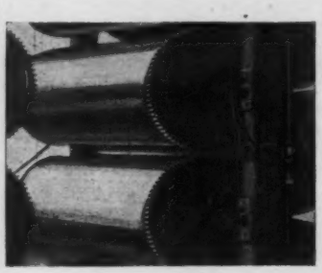

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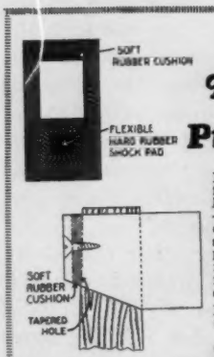

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filled up after three hours of running and from this point on does poor carding. Here are the figures on what I found during the period of a test from 15 minutes after starting to five hours:

Duration of Test	
15 minutes	1 3/8 ounces of strips
30 minutes	1 7/8 ounces of strips
1 hour 30 minutes	2 7/16 ounces of strips
3 hours	3 1/16 ounces of strips
5 hours	3 5/16 ounces of strips

It will be readily observed that the weight of strips recorded for the 5 hours run is only ¼-ounce above the weight for the 3-hour run. This proves conclusively to my mind that a card should be stripped at least once in three hours. The wire becomes full of dirt, leaf and short fiber and will not function efficiently if the card is allowed to run beyond the three hour period. If run over this period, dirt, leaf, and short fibers will pass along with the good cotton having a bad effect on the good results which would otherwise have been obtained.

I think that "CONTRIBUTOR No. 6075" does not have his mote knives set close enough. He uses a 17 gauge at the top and a 12 gauge at the bottom. I feel sure that a closer setting of both of these knives would result in getting a great deal more motes, and that is what we are after. On Middling cotton 1-inch and 1⅛-inch it would be better to run the licker-in somewhat faster, say 425 to 450 r.p.m., instead of the 405 r.p.m., that he is using. This is especially true when using a heavy lap, as he is doing. I have had the best results as regards evenness, cleanliness and strength, with a draft of 120 or more.

Creeling in laps every other one will give good results. Grinding should be done lightly and often, and the setting checked often. The emery should be watched and kept in good condition or the wire will just be polished rather than sharpened. Where it is possible I would suggest the following to keep the cards in good working condition:

1 flat cleaning brush for 80 cards
1 straight wire burnisher brush for 80 cards
2 traverse grinding rolls for 25 cards
1 drum grinding roll for 50 cards
1 flat grinding machine

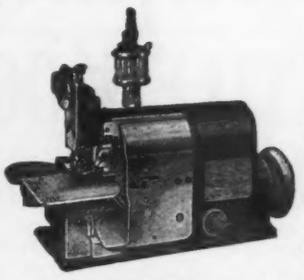
This contributor gave his card settings. I would like to give mine, because I feel sure that they will give good results. This statement is based on my own experience with them, of course:

Doffer to cylinder	7/1000
Licker-in to cylinder	7/1000
Feed plate to licker-in	10/1000
Top mote knife to licker-in	7/1000
Bottom mote knife to licker-in	10/1000
Front plate to cylinder	strips required
Back plate to cylinder	22/1000
Doffer comb	12/1000
Flat comb to flats	34/1000
Spiral flat brush	1/32-inch from foundation
Flats to cylinder	10/1000
Cylinder screen to cylinder, front	1/16-inch
Cylinder screen to cylinder, middle	34/1000
Cylinder screen to cylinder, back	34/1000
Licker-in screen to cylinder	12 to 34/1000
Licker-in screen to licker-in	12 to 34/1000

It must be understood that the duty of a card is to clean the lap and remove any remaining mote, short fiber or neps, without damaging the good fiber and to produce a good clean sliver.

Good carding will never be obtained if the lap fed to the card is unsatisfactory, no matter how well the card is ground and set. The lap must be even in weight, yard by yard, all of the impurities possible removed without injuring the fibers by the pickers.

CONTRIBUTOR No. 6197.



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92. Silicates of Soda—A review of the properties of silicates of soda and their various uses. Philadelphia Quartz Co., 121 S. Third St., Philadelphia, Pa.

93. Metso — Describing this industrial cleanser which has wide use in industrial cleaning of metals, floors, etc., and is used in kier boiling, silk and rayon degumming. Philadelphia Quartz Co., 121 S. Third St., Philadelphia, Pa.

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95. Onyx Processing and Finishing Compound Catalog—A thirty-two page booklet listing and describing entire line of processing and finishing compounds, covering every process on all types of fabric. Onyx Oil & Chemical Co., 15 Exchange Place, Jersey City, N. J.

58. Trichlorethylene, Its Properties and Uses—a forty page booklet showing the properties and uses of Tri, with many valuable suggestions regarding its applications in drycleaning, spotting out, scouring textiles, etc. R. & H. Chemicals Dept., E. I. duPont de Nemours & Co., Wilmington, Del.

96. R. & H. Non-Flammable Solvents—describing the characteristics and many uses of non-flammable solvents. R. & H. Chemicals Dept., E. I. duPont de Nemours & Co., Wilmington, Del.

97. Suggestions For The Modern Silk and Rayon Throwster — describing the various uses for Laurel Brand Products and giving valuable suggestions in silk-soaking, degumming, dyeing, sizing and finishing. Laurel Soap Mfg. Co., Inc., Tioga, Thompson & Almond Sts., Philadelphia, Pa.

1. Cotton Picking, Carding and Spinning—Covered by three different catalogs. Picking catalog covers Opening and Picking Machinery; Card Room catalog covers Cards, Combers and Roving Frames; Yarn Machinery catalog covers Spinning, Twisting, Spooling, Quilling and Reeling. By Whitin Machine Works, Whitinsville, Mass.

2. Pepperell Equipment—10 page illustrated booklet showing High Speed Warping from cones as adopted by Pepperell Manufacturing Company after thorough experiments, installation and product photographs. Issued by Universal Winding Company, Boston, Mass.

4. New Methods of Opening Cotton, also "Brown" Automatic Mixing and Cleaning Distributor — Illustrated booklets showing advantages of Centrif-Air Cotton Cleaning System. Pamphlets also on better picking and carding and pneumatic trunk line cleaner. Issued by Centrif-Air Machine Company, Atlanta, Ga.

10. Leathers, Textile—Booklet No. 101, 48 pages. Illustrated. Showing BONDARON Check Straps—Lug Straps—Harness Straps—Pickers—Belting, both round and flat, etc. Horsepower tables and other interesting information. By Charles Bond Company, 617 Arch Street, Philadelphia, Pa.

11. Whitinsville Rings—16 page illustrated booklet. Describing ring manufacture, measurements, types, uses. How to determine flange sizes. By Whitinsville Spinning Ring Co., Whitinsville, Mass.

15. The Powers System of Thermostatic Control—"Slasher Room is Bottle-Neck of Textile Mill." 18 page illustrated booklet showing importance of proper treatment of cloth in slasher room and advantages of Thermostat over hand control. Also room temperature control illustrations. Issued by Powers Regulator Co., 2739 Greenview Ave., Chicago, Ill.

20. Bleaching, Dyeing, Finishing and Printing Textile Goods—70-page booklet containing interesting information on faults and methods in finishing goods, useful tables and definitions. By Bosson & Lane, Atlantic, Mass.

21. Warp Sizing and Composition of Cotton—Folder containing reprints of articles carried by textile publications of interest to progressive mill superintendents. By Seydel-Wooley Co., 748 Rice St., Atlanta, Ga.

22. Tragasol and Its Uses—Booklet, 60 pages, constituents and properties—Dissolving and preparation—sizing and dressing of yarns—cloth finishing—miscellaneous. By John P. Marston Co., 247 Atlantic Ave., Boston, Mass.

23. Practice of Rayon Sizing in American Mills, Raygomm, Lakoe Gum—Three booklets on products for sizing and finishing rayon and other textiles, presented by Stein Hall & Co., Inc., 285 Madison Ave., New York, N. Y.

25. "Lupogum" and "Monopole Oil"—Two booklets on textile sizing and finishing products. Jacques Wolf & Company, Passaic, N. J.

28. Akron Belting.—Practical Rules and general information for users of belting with belting catalog. By Akron Belting Co., Akron, Ohio.

29. Continuous Card Stripper—A 20 page booklet describing in detail continuous card strippers, their advantages, the power required to operate, etc. Saco-Lowell Shops, 147 Milk St., Boston, Mass.

30. Lubrication of Textile Machinery—32 pages, illustrated. Data covering the economical lubrication of all textile machines. New York and New Jersey Lubricant Co., 292 Madison Ave., New York, N. Y.

38. Sleaziness in Full Fashioned Knitting—Illustrated survey with samples of fabric showing causes of sleaziness and methods to be employed in eliminating it.—By Textile Machine Works, Reading, Pa. (This company also issues parts catalog for Reading full fashioned machine with general information on subject of full fashioned knitting.)

44. Points of Interest in and Around Atlanta—36 pages. Illustrated, describing places of scenic and historic interest in Atlanta in particular, and the Southeast in general. Atlanta Biltmore Hotel, West Peachtree, Fifth, Sixth & Cypress Sts., Atlanta, Ga.

45. Fidelity Universal Ribbers—A forty-eight page booklet showing the advantages and many styles of ribbed fabric and describing in detail and illustrating the latest developments in ribbers. Sent free on request by Fidelity Machine Co., 3903 Frankford Ave., Philadelphia, Pa.

55. Interpretation of Analysis for the Layman—An eight page booklet explaining what the various terms used in fatty oil and sulfonated oil analysis mean, enabling the ordinary textile man without chemical education to interpret the various chemical analyses. National Oil Products Co., Harrison, N. J.

56. Technical Service Data—giving information on processes of textile manufacture in the use of oils, softeners, etc. National Oil Products Co., Harrison, N. J.

59. Vat Colors and Their Oxidation—A revised edition giving information and methods of the dyeing, printing and Perborate of Peroxide "fixation" of vat colors. R. & H. Chemicals Dept., E. I. duPont deNemours & Co., Wilmington, Del.

62. Rubber Products for the Textile Industry—a 40-page booklet giving a wealth of information on the proper selection, installation and operation of rubber belts, together with charts showing horsepower rating, pulley sizes, V-belt sizes, also information on all types of hose and rubber covered rolls used in the textile industry. Manhattan Rubber Mfg. Division of Raybestos-Manhattan Inc., Passaic, N. J.

63. S-W Paint Standardization Plan—valuable booklet telling how protective coatings can effect economies in plant operation and maintenance, describing how each surface is finished to best meet its specific needs, giving ideal lighting and sanitary conditions and economies in increased production. Sherwin-Williams Co., 601 Canal Rd., Cleveland, Ohio.

64. Efficiency and Performance of SKF Roller Bearing Spindles — A twelve page booklet showing the advantages in power consumption, increased production, savings in lubrication, increased yarn breakage strength to be secured through roller bearing spindles. SKF Industries, Inc., 40 East 34th St., New York, N. Y.

65. Why Cooper Hewitt Light is Better Than Daylight—a 16-page booklet explaining in detail the importance of good lighting and the necessity of proper quality as well as proper quantity of light. General Elec. Vapor Lamp Co., Hoboken, N. J.

66. Dronsfield's Patent Portable Auto-Feed Needle Point Grinder No. 176, describing a new departure in card grinding—John Hetherington & Sons, Inc., 250 Devonshire St., Boston, Mass.

69. Monel Metal Equipment for the Textile Industry—a 50-page buyer's guide and catalog with more than 100 illustrations of various items of monel metal dyehouse equipment. International Nickel Company, Inc., 67 Wall St., New York, N. Y.

72. The Merrow Butted Seam—A 16-page booklet defining and illustrating the Butted seam, describing its properties and outlining some of the advantages to be gained by its use in textile fabrics. The Merrow Machine Co., Hartford, Conn.

73. New Reeves Catalog T-32—A treatise on efficiency speed control—including valuable information of special importance to textile industry men and production executives outlining advanced methods of speed regulation. Reeves Pulley Company, Columbus, Indiana.

74. Colgate-Palmolive-Peet Bulletin No. T-22—booklet giving complete details of degumming and dyeing in a single bath with soap. Colgate-Palmolive-Peet Co., 919 North Michigan Ave., Chicago, Illinois.

75. The Facts About Armstrong's Seamless Cork Cots—A helpful book containing plain facts, cost studies based on actual mill records, expert analysis, complete details on the advantages of Armstrong's Seamless Cork Cots. Armstrong Cork & Insulation Co., 923 Arch Street, Lancaster, Pa.

77. Bulletin T 200—Illustrating and describing the new Reeves Variable Speed Drive for spinning and twister frames, explaining its many distinct advantages, and giving charted results of exacting tests. Reeves Pulley Company, Columbus, Indiana.

78. Booklet I. 1289 A—Loom Motors and Control—giving details of the low installation, operating and maintenance cost of Westinghouse Loom Motors. Westinghouse Electric & Manufacturing Company, Room 2 N, East Pittsburgh, Pa.

88. Dayton Cog Belt Catalog—a 32 page booklet full of vital information on power drives, plainly and simply assembled and arranged so that anyone can select the proper standard drive for any condition. It also provides data for the calculation of drives where acquired. The Dayton Rubber Mfg. Co., Dept. C-11, Dayton, Ohio.

89. Lubriplate, An Important Advancement in Lubrication—describing this new lubricant, its qualities, uses and advantages. Lubriplate Corporation, 405 Lexington Ave., New York City.

90. Atwood Booklet. Describing Atwood Winders, twisters, wire swifts, and various types of feed rolls—useful to throwsters interested in learning the principal features of various Atwood machines. Atwood Machine Co., Stonington, Conn.

In Building for Profit

You will find these valuable.

Yours, for the asking.

KNITTING SECTION

Elasticity is a feature of our Model K machine

Elasticity of Welt Concerns Customers, Says Hosiery Buyer

Women Invariably Stretch the Top of a Stocking Before Buying It Retailer Finds

Customers show greater concern over the elasticity of the welt of a stocking than they do over its length, according to the buyer for a chain of exclusive sportswear shops located in the metropolitan area. "Few women coming into our stores inquire as to the length of a stocking, but variably they put both hands in the welt and test it for elasticity," she said. "Of course, a good stocking should meet this test. On rare occasions we find women asking for an extra long stocking, but the standardized sizes seem to meet average requirements."

Clocked hose are in fairly call in better merchandise $1.35 and $1.95, this buyer adding that

Reprinted from Women's Wear Daily

Women test a stocking for welt elasticity before buying, says this newspaper item.

CUSTOMERS WANT WELT E-L-A-S-T-I-C-I-T-Y

MODEL K HAS IT!

"This is the Scott & Williams Machine Age"

ESTABLISHED 1865

SCOTT & WILLIAMS

INCORPORATED

366 BROADWAY, NEW YORK, N. Y.

SOMETHING NEW IN A CLOCK

A clock within a clock with

GRADUATED COLOR

possible only on the

STANDARD 80 WRAP

Colors shading from dark to light, and vertical stripes on adjacent needles . . . with these exclusive accomplishments of the Standard 80 Wrap machine, you can produce clock patterns that are entirely different from anything you have ever seen. These new clocks are most effective!

This is only one of many exclusive and different styles which can be made on the Standard 80 Wrap.

STANDARD TRUMP

Established 1872

STANDARD-TRUMP BROS. MACHINE CO., INC.

366 BROADWAY, NEW YORK, N. Y.

BUILDING for PROFITS in the KNITTING INDUSTRY

By R. L. P. Reifsneider

IN many respects, the problems and possibilities of the full-fashioned hosiery manufacturer, in "Building for Profits", are those of the other divisions of the knitting trade. These are outlined in a forceful manner in this article by Mr. Reifsneider, and his comments and suggestions may be taken specifically to apply to the knitting industry as a whole. . . . . .

POLICIES running the gamut from errors of judgment to willful extravagance in the conduct of industrial enterprises while demand for manufactured products simplified selling at profitable price levels have been pretty well eliminated by force of circumstances, but revision of methods will be carried on in seeking returns from effort and capital investment calculated to stimulate a latent ambition to expand old fields of endeavor and explore new ones.

Like obsolete and uneconomic machinery that must be displaced for modern installation, new methods will slip into the grooves from which the worn-out have been banished. Households and municipal, state and Federal Government knew no need for budgeting so long as income exceeded outgo. The budget was found to solve the problem of making both ends meet. It has served its purpose in industry so far as it has been applied to judicious apportioning of expenditures to receipts. How many manufacturers of full-fashioned hosiery, using this division of the textile industry for illustrating a point, budget their production, or, in other words, increase or reduce it on the basis of say, seasonal consumptive demand? Probably few did so while the markets were taking all that mills were producing. Disregard of the gains to be had from systematic budgeting of hosiery output is one form of neglect.

Neglect of a manufacturing plant may be even a more serious matter than neglect to maintain a well balanced budget of the plant's financial structure. The writer recalls accompanying an office executive on a tour of a very large textile plant many years ago and being shown the power plant, where we halted for a moment during which the executive said to the engineer, "How long has that main driving belt been in use?

"For some years," the engineer replied, "and it is good for many more."

"It looks to me," said the executive, "as if it might break, and I think it ought to."

Within twenty-four hours that driving belt parted and there was damage to machinery to repair which cost the company far more than the new belt. The damage to the financial status of a manufacturing plant, although perhaps not fully appreciated in its extent, may be very great, due to disregard for a law of economics that demands periodical replacement of equipment, for which there are two basic reasons:

1. More economic plant operation
2. Adaptation of mechanics to style

Economy of plant operation does not necessarily imply a mere reduction of the cost in dollars and cents, since running machinery that does not provide for a profit on the product is not economic operating. In somewhat recent years most manufacturers were accused of not figuring into their cost sufficient sums to cover depreciation. It therefore was rather refreshing, recently, to find that in order to show a profit from operating it was expedient to reduce the sum written off in inventory for depreciation and obsolescence.

In meeting the prices of competing mills, a manufacturer of full-fashioned hosiery ascertained from a study of his cost sheets that his margin of profit was too narrow for comfort. Following regular procedure two years ago, $10,000 was set aside for depreciation, figured on the basis of ten per cent of $100,000. "We knew the plant wouldn't fetch more than $25,000," the management told the writer, "although properly inventoried at $100,000 according to the common rule, and last year we set aside only $2,500—ten per cent on $25,000. That is quite an item in figuring our cost."

Building for profit implies modernizing of equipment. By the same token that the first power machine was more economical than the old hand loom with which full-fashioned stockings were knitted originally, cost of production declined with the progress of development in machinery for producing full-fashioned hosiery. Not only in increased number of sections and higher speed is the 1932 model, for example superior from the economic standpoint to the model of 1920 and subsequent years. Applying this premise to the present day and to the future, modernization is obviously essential to economic plant operation.

The financing of new installation for expanding its field of utility without expansion of the plant is, necessarily, simplified where sums written off for depreciation have been actively set aside, and for proceeding in moderation the fund thus created may be ample. It is the aim of some manufacturers groping their way out of the condition which has carried hosiery values to their lowest level for all time, to establish an economic balance in equipment.

The acquisition of a balanced full-fashioned hosiery unit is virtually an automatic achievement of

progressively building for the future while building for profit for the present, as shown in the practice of manufacturers speaking from their own experience and that of others. A given per cent of a plant, depending on physical conditions and means for carrying a project to its completion, without overloading the financial structure, is scrapped periodically—say, for example, every year. Using ten per cent for the purpose of illustration, the floor space acquired through this displacement of equipment is then occupied with the latest type of modern machines best adapted to the needs of the individual manufacturer, the installation amounting say, to five per cent of the numerical strength of the plant before discarding old machinery to make room for new. This proportion of displacement and new installation provide probably sufficient leeway in matter of floor space and financing.

There is, of course, nothing new in this plan for rebuilding a hosiery manufacturing plant on the foundations of the original. Its newness lies in the fact that it is being more generally applied, in great extent under stress of circumstance as a development of the economic depression without which the machinery of commerce would, like the worn-out driving belt referred to, give way eventually, resulting in what the world has seen in the past three years.

Rebuilding the Industry.

On the word of an authority of recognized equipment for sponsoring the statement, the number of full-fashioned hosiery knitting machines scrapped in 1931 and 1932 exceeded the number of modern machines installed, this unwritten record opening up a field for thought as to an ultimate rebuilt industry. Necessarily, the dismantling of machinery and sending the parts to the junk heap reduced the industry's potential machine capacity, a first step, practically, in adjusting output more nearly to consumptive demand and widening the gap between periods of over-production and balanced production. Among others announced in trade publication print as having scrapped worthwhile numbers of machines in the past few years may be mentioned the Apex Hosiery Co., Berkshire Knitting Mills, The Nomend Hosiery Mills, Phoenix Knitting Co., Pohatcong Hosiery Mills and Schuylkill Valley Mills. There could be added to this list the names of manufacturers whose new installations this year were planned to follow immediately upon removal of equipment that is being disposed of as scrap. As surely as coarse-gauge machines of a decade ago have almost totally disappeared from American hosiery mills, will much of the coarser gauge equipment of the present, viewed by some interests as a sort of necessary momentary evil, have been discarded finally before the end of the present decade, some of it to be replaced with finer-gauge and modern construction. Some of it doubtless will pass out in the mortality that claims the weaker units.

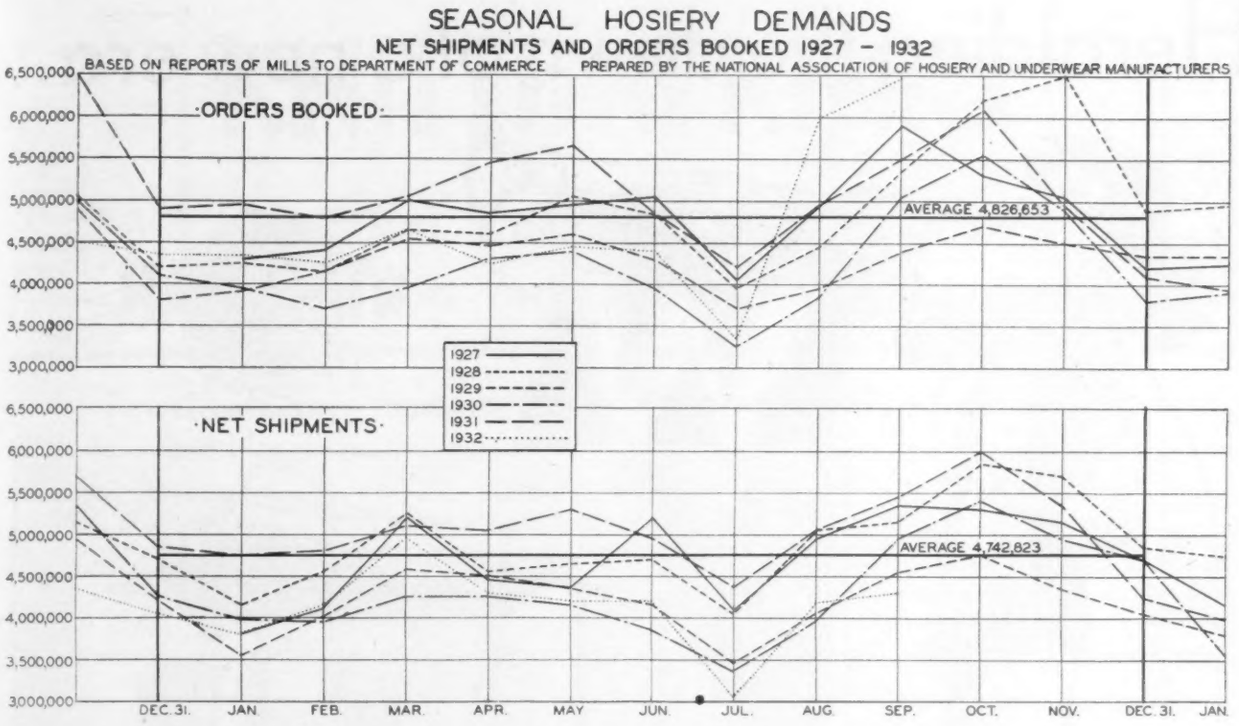
Women's silk hosiery offers style, comfort and service. Style, it appears, subordinates, within reason, the other attributes, utility ranking second. As style implies fineness of fabric, it would be an assumption on the part of many factors that finer gauge stockings will predominate in the higher price brackets, particularly since the fine gauge of the present taxes woman's purse no more heavily than the coarse gauge of a comparatively few years ago. The progressively balanced mill, it will be seen, is equipped for fineness on an economic cost basis, as well as for coarser fabric at prices that, especially in the present situation, appeal to the masses. And the cost of producing the latter diminishes in proportion as the more obsolete equipment is relegated to the junk pile, the more economic operating of new equipment figuring in a reduction in plant overhead. The balanced mill therefore is the better equipped for all-year activity, of course making allowance for seasonal curtailment in output of one type or another.

Building for the future while building for profits for the present has a broader meaning now than along in the middle of the previous decade. One of the first of the southern manufacturers to install 45-gauge machines explained at the time, in response to adverse comment, "we are adapting our mill to the needs of the future." Profits at that time were give only secondary consideration as a factor in the selection of gauge, being big enough to be spoken of as "an unknown quantity".

The balanced mill facilitates the budgeting of production to seasonal demand, the vogue and the matter of retail price. Obviously, as prices rise in a given group, demand in that group declines, and as production in a given group increases, the tendency will be to lowering of price, under the operation of an economic law which no legislative body has undertaken to repeal. So, it would appear, the spread between the retail prices of modern fine gauge and for current mass production of coarse gauge might narrow, the effect of which should be, logically, to increase interest in the modern.

As probably in most divisions of the textile industry, a hosiery mill may be "busy", yet showing no sufficient margin of profit on sales to take care of inescapable amortization which is another way of saying "Lay something aside in clear weather for the rainy day that is as certain as alternating day and night." That the busy mill may be working in the "red", may be attributable to neglect of plant revamping by the process of making room for new, modern equipment, through displacement of the obsolete or so badly worn as to be a drag on a mill owner's assets. Accepting the word of persons in a position to speak with accuracy, 51-gauge hosiery of high standard type construction is being marketed profitably by manufacturers.

Fineness obviously calls for modern equipment, and necessarily, because of the higher cost imposed by use of late models of fine gauge machinery, fineness must not ignore utility, for, while fastidious, discriminating woman thinks first of style plus comfort, her favor, when once lost because of avoidable defects or deficiencies, is not easy of reinstatement. As style varies with seasons, as does production and consumption, the balanced mill is in large extent adapted to changing requirements. This is to be



taken into consideration in planning to build for profits for present and future, since the scrapping of more machines in the past two years than were installed during that time—a procedure that seems likely to prevail this year—suggests the proposal that the full-fashioned industry is fast heading toward one of less equipment, relatively, but better equipment and more frequent replacement.

Net shipments of women's full-fashioned hosiery attained their highest level last year in the August-September period, which was virtually the same as that in 1929, the highest for all time, according to a chart prepared by the National Association of Hosiery and Underwear Manufacturers from reports of mills to the Department of Commerce and checked with production. The record for each year from 1927 to 1932 with the exception of 1927, was well above the average. Net shipments in 1929 and 1932 are given in the survey as approximately 2,200,000 dozens. In each year of the six years covered by the survey, it is interesting to note, the lowest net shipments were recorded in July. The lines for four years of the six for which the chart accounts converge on July as the month of light net shipments, with 1929 making the better of the July showings.

Production of women's full-fashioned hosiery has increased in very large extent by displacing seamless knit, which in July 1932 dropped to their lowest point in net shipments; approximately 250,000 dozens. There was an increase for the August-September period, but in no month since 1929 was the average for net shipments reached in either of three years—1930, 1931 and 1932. As it is widely conceded in the trade that there remains a considerable production of circular knit hosiery to be displaced before, if ever, full-fashioned attains a complete monopoly of the use of women's silk hosiery, it would appear that the full-fashioned industry has not yet reached its possible maximum.

In reaching out for the modern in equipment, some manufacturers doubtless will be inclined to go further into experimentation with single unit machines than some who abandoned the use of them. It is related that several single unit machines of 24 sections have been converted into standard types of leggers. These may be isolated cases offering no proof of impracticability of the single unit basic idea—the production of women's full-fashioned hosiery by a single operation that eliminates toppers and transfer of legs to footers.

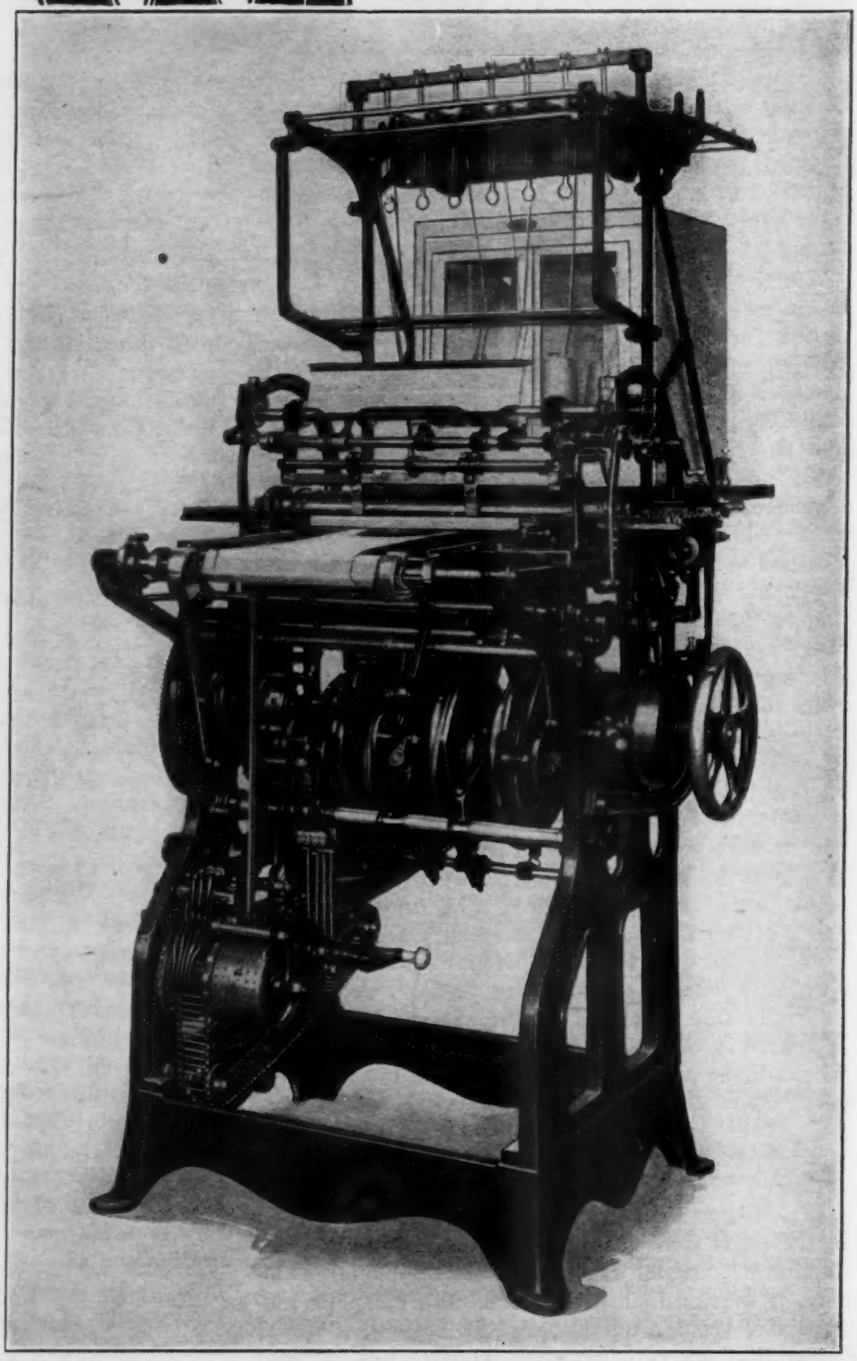
Since the production of men's full-fashioned socks has declined to around 15,000 to 20,000 dozens a month, compared with 1,400,000 to approximately 2,000,000 dozens of circular knit, it would appear that manufacturers of the latter have not fully developed their markets, although having bestowed much attention upon styling and producing increasingly fetching designs. There is, clearly, a broad field also for upbuilding in seamless knit lines for men, boys, children and misses.

In hosiery, as in other divisions of textiles, there is room for improvement in the packing. Some manufacturers say they have had encouraging results from use of more artistic cartons and labels. Cartons that are not attractive in design or coloring might as well be discarded along with obsolete machinery. Substitution of more modern packing accords with the idea of building for profit by means which give a lift to other industries. Diversification of lines in a given group of textile products has brought comfort to some manufacturers, in lessening their operative and sales overhead. That of course is calculated to be viewed as advancement for one unit at the expense of others, but in strict accord with the

(Continued on page 113.)

Heralding the dawn of a new era..

WILDMAN
THE WORLD'S STANDARD



The
WILDMAN
SINGLE HEAD
Full-Fashioned
Hosiery
Machine

Literature on Request

WILDMAN MFG. CO.
Full-Fashioned Division
NORRISTOWN,
PA.

Figures on Seamer Production and Needle Breakage

Several full-fashioned mills' answers to this question. What are your figures? . . . . .

EDITOR COTTON:

This replies to "CONTRIBUTOR NO. 6185", who asked in your January issue, for discussion as to a reasonable production that might be expected of seamers on Union Special machines on full-fashioned numbers.

I would say that on a Union Special seamer, running 7-thread and 4-thread silk as indicated in the inquiry, on silk picot top numbers, that the minimum production for skilled operatives should run four dozen per hour on 7-thread and 3½ dozen per hour on 4-thread. Much better production than these figures may of course be expected from a high percentage of skilled operators, but I submit these figures as being a satisfactory average.

This man stated that on this work he is breaking one needle to 20 dozen seamed. Apparently he has something seriously wrong in his back seaming department. Among the possibilities are machines poorly adjusted, operators improperly trained, and improper seaming thread used. With the machine properly adjusted and oiled and the correct seaming thread, a machine should go along for weeks at a time, even months, without breaking a needle. I might say that the condition of the work to be back seamed has an important bearing on the successful operation of the seamer. Where selvages are not good, or where the fabric of the stocking is not uniformly knitted,—that is, one selvage being more loosely knitted than the other, requiring a good bit of juggling of the fabric on the part of the seaming operator to make such points as welt transfer line, narrowing marks and high spliced heel agree—a falling off in production and an increase in needle breakage will be the natural results.

CONTRIBUTOR NO. 6187.

EDITOR COTTON:

This replies to the questions of "CONTRIBUTOR NO. 6185" with regard to average production on Union Special seaming machines, on full-fashioned hosiery.

I wish to say that on 7-thread work, an average seamer should seam 3½ dozen per hour, while a good seamer will run about 5 dozen.

On 5-thread work, an average seamer should seam 3 dozen per hour, while a good seamer will run about 4½ dozen.

This man also asked about needle breakage on these machines, stating that he is breaking about one needle to every 20 dozen seamed. We find that we are breaking one seamer needle to 40-50 dozen. Before our operators became familiar with the machines, and class of work, our needle breakage was about twice this. We feel that a *good* average would be one needle to every 100 dozen. This of course would be under the best of conditions.

CONTRIBUTOR NO. 6188.

Handling Yarns in the Knitting Mill

EDITOR COTTON:

In one of my issues of COTTON, I noticed a request from "CONTRIBUTOR NO. 6110" for methods for handling yarns, from the supply department to the knitting room. I would like to submit the following ideas. I hope that if this man or any other reader has a better method, that we shall have a description in "KNITTING KINKS".

In small mills, as well as large ones, it is not always possible to have an actual weight of yarns until the yarn has been run on the machines and the papers and cones from each case saved. Therefore, we will take a theoretical weight, such as weighing 100 cones and papers from each customer from which yarns are secured, and weigh them; after finding this weight, multiply the amount of cones in each case by this constant figure and get the theoretical weight. Then have some tags made (see sample below) and enter on the tags as outlined. Then, when all of the yarn is actually used in the knitting room, save all papers and cones and weigh against the theoretical weight; from this procedure claims for shortages, etc., can be made. Make certain this tag is put on the case to follow it through until all of the yarn has been used up. Save all of the tags for future records as they will come in handy many times in determining the loss of weight, etc.

Here is a rough idea of the tag used:

Date received _____
Case No. _____
Cust. Wt., Gross _____
Cust. Wt., Tare _____
Cust. Wt., Net _____
Actual Wt., Net _____

As for rayon yarn, I find a good method of deter-

B&C yarns

MERCERIZED
PRESHRUNK
BLEACHED
NATURAL
GASSED
COLORS

Boger & Crawford
Philadelphia, Pa.

FRENCH CAMPBELL, JR., CO.
417 Provident Bldg., Chattanooga, Tenn.
WILLIAM R. RIETHEIMER
222 W. Adams Street, Chicago, Ill.
DONALD R. JONAS
Lincolnton, N. C.

mining the oil percentages to be as follows: Take a cone from a case, say about midway of the case, as this will be an average cone for moisture, etc. Reel 240 yards, then weigh and find the weight in grains with the oil. Then send it to the dyehouse to be washed out. After washing, put in a dryer and dry for about 24 hours if the weather is not very damp—longer if extremely damp—until it is bone dry. Then hang up until it regains its natural state. Then weigh and find the difference, this figure being the correct oil content.

CONTRIBUTOR No. 6180.

A Discussion of the Parts of Scott & Williams Knitting Machines

Plate IX

(This continues the series of short articles discussing the machine parts on Scott & Williams machines, by taking up in order the various plates in the manufacturer's catalog with which all men using this make of machine are familiar.

The first article, on page 126 of the October issue, covered Plate I, Plate II, and Plate III; and the second article, on page 86 of the November issue, covered Plate IV. The third article on page 97 of the December issue, took up the parts shown on Plate V. The fourth article, on page 94 of the January issue, covered Plates VI, VII and VIII.

It is suggested that in reading these discussions, the reader turn to the plate in question in the catalog and refer to it while reading the comments found in these articles. Furthermore, it will be a good idea to clip these discussions and file them in the catalog along with the plates to which they refer.

The numbers in parentheses following the names of parts are the same numbers used by the manufacturers in referring to the parts in the catalog.—The Editor.)

EDITOR COTTON:

The Rack Wheel

The rack wheel (6046) is as you know a means of transmitting motion derived from the main pawl and plate. The belt shipper drum (5796), clutch shipper drum (6044), and drum driving gear (6040), all depend on the rack wheel to make the correct move at the proper time. Various devices and attachments are operated by motion supplied by the pattern chain, auxiliary pawl or high speed gear, but in most cases there is a direct or indirect connection through which the motion needed can be traced back to the rack wheel.

The rack wheel must be kept tight to the pattern shaft (6503) by means of set screws (15128). Many Scott & Williams fixers make a big mistake in attempting to correct various timing troubles by moving the rack wheel forward or backward on the pattern shaft. The machine builders have provided a much safer and better timing adjustment, namely, the main pawl plate (7001) shown on Plate V and the drum driving gear (6040) shown on Plate IX.

Timing Trouble

Timing troubles can be caused by rack wheel set screws being loose, main pawl screws being loose, main pawl plate slipping, main pawl plate being worn, drum driving gear set screws (15128) being loose, drum driving gear adjusting screws (15109) being loose—all of these minor ailments will bring on a variety of machine troubles causing waste, seconds, production losses, etc.

If timing trouble has developed see that the rack wheel is tight on the pattern shaft and also that the main pawl plate is taking the right tooth in the rack wheel. If the foregoing are found to be satisfactory check up on the main pawl plate for wear and looseness. A notch will be found on the side of the main pawl and plate showing how the plate was set when the machine was assembled. This notch also serves as a mark to check up for main pawl plate slippage. When machines have run a number of months it is high time that the main pawl plates be advanced to make up for the amounts worn off; then be sure to re-mark the plates, their original positions can be determined by the old marks. If the pattern drum must be advanced or retarded to overcome timing trouble, make use of the drum driving gear adjustments. The depth of the teeth in the rack wheel and distance between them should be left *as is* by all means.

Belt Shipper Drum

The belt shipper drum (5796) requires little attention other than to see that it is properly located on the shaft (6503) and that the set screws (15128) are tightened securely. The two ridges on the shipper drum are a simple means of shifting the belt from high to low speed pulleys and the drum cams (5726, 5601, 5841, and 5809) answer the same purpose. Belt shipper drum cams (5805 and 5534) are used only on B-5 and B-3 machines to stop the machine for the transferring operation.

Should a belt shipper drum need re-locating for any reason, simply rack the machine around, get it completely off the heel and on the foot. Loosen the shipper drum set screws and move the drum until the belt shifter rests in the gap between the two ridges and near enough to the tapered part of the ridge so that the belt will shift immediately when the drum moves.

Bad splicings are often caused by belt shipper drums being improperly set. This happens more frequently in the high splice above the heel than it does in the foot, and is caused by the shipper drum being advanced too far, so that when the machine makes the drum move which throws the splicing finger into action, it shifts the belt partly off of the high speed pulley causing the machine to slow down. This slowing down changes the momentum of the splicing finger and causes it to put in and lift out the splicing yarn in an uneven line.

Improperly set shipper drums are not caused by ignorance, but rather by carelessness. The most common cause is failure by the fixer to retard the shipper drum when for some reason or other he had

to advance a main pawl plate. The shipper drum should be kept flush against the frame of the machine, and the same applies to the drum driving gear (6040). These two parts keep the pattern shaft (6503) and all parts attached to it from moving from right to left when the clutch shifts to change the motion of the machine. This point is important as many minor ailments will develop from a pattern shaft having too much end play.

Belt Shipper Drum Friction

The belt shipper drum friction (7098) shown on Plate IX has but one function, and that is to keep the drum (5217) shown on Plate V and the different parts shown on Plate IX, which are rigid on the shaft (6503), from turning too freely. On all S. & W. models which have auxiliary racking pawls, such as the Model H H, K, and R I, it is more important to keep the shipper drum friction in good shape than on a plain B-5 or B-3 machine. The reason I have mentioned particularly the models having auxiliary pawls is because the motion developed by this pawl is more abrupt than that made by the main pawls. For this reason it is more likely to move the various drums and gears too far on the different strokes unless the friction is in good shape so it will prevent the pattern from "running away", as some fixers call it.

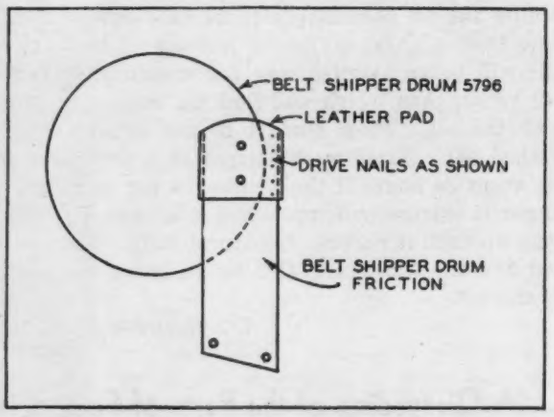
Damaged cylinder walls, broken needles, seconds and waste can all be caused by a worn-out friction. One of the reasons that frictions do not hold well is that they become oil-soaked and by constant pressure against the shipper drum the portion of the drum on which the leather pad rests will become smooth, which naturally decreases the holding power of the friction. In many cases frictions are neglected entirely until they become worn down so far that the shipper drum rides against the rivets which hold the leather pad to the steel plate. Even though these rivets are brass, much of the holding power of the friction is gone as a result of the metal-to-metal contact on an oily surface.

Repairing Worn Friction Pads

To repair a worn friction pad quickly and with little effort or expense, cut a piece of leather the same shape and size as the one on the steel plate (7098). (See sketch). Nail this piece to the worn pad with four or five brass cobbler's nails so that the nails will clinch when driven through both pads against the steel plate. Be sure to drive the nails into the pads along the outside edge as shown in the sketch so that the nail heads will not come in contact with the shipper drum. A friction repaired in this manner will last a long time and when it wears out, simply pull the nailed piece off and nail on another.

Chain Ratchet and Sprocket

The chain ratchet and sprocket (6043) requires very little attention. It is usually kept well oiled by surplus oil dripping from other shafts and bearings above it. Too much tension on the chain ratchet by the friction (7100) will cause premature wear on both ratchet and friction and makes replacement of



these parts necessary. The drum driving gear (6040) is very useful when it becomes necessary to advance or retard the pattern drum. The method of adjustment is easy to understand, simple and positive. The set screw (15128) and adjusting screws (15109) should be tightened securely after adjustments have been made. The pattern shaft is practically wear-proof if oiled regularly at the bearing points in the frame. Occasionally the adjusting stud (6628) will become bent through accident or abuse and must be replaced.

Down Pick Controlling Lever

The dropper (down pick) controlling lever (6041) must work freely on the stud (6552) and must not press too tight against the drum cams when the long end of the lever is in its uppermost position on the highest drum cam. In other words, it must be fully up without excessive pressure on the lever as too much pressure will cause the lever to break or prematurely wear out the prong which rides on the drum cams. More will be said about this adjustment in discussing other parts attached to the lever (6041) in a later discussion. The drum idle gear (6039) should turn freely on the stud (6552); it is simply a means of transmitting motion from the drum driving gear (6040) to the drum gear (6030) shown on Plate V.

Clutch Shipper Drum

The clutch shipper drum (6044) with its various cams as shown on Plate IX is the sole means of supplying motion to shift the clutch right to left and vice versa. This being necessary to make the machine reciprocate while making the heel and toe and run in a circular motion while making the remainder of the sock or stocking. The clutch shipper drum set screws (15128) serve a double purpose, they keep the drum from moving from right to left on the shaft, also from moving forward or backward. Keep these set screws tight, by all means.

Clutch Shipper Cams

Through constant use the corners of the tapered portions on the clutch shipper cams (6045-1 and 6045-2) will become slightly rounded and cause the clutch to bind when shifting on account of being too late. In such cases it is merely necessary to turn the

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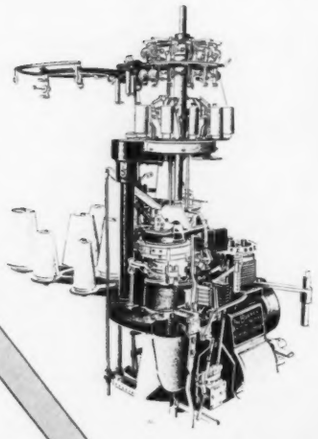

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shipper drum adjusting screw (15092) clockwise and thus advance the shipper drum slightly to make up for wear. Where cams 6045-1 and 6045-2 are worn excessively on old machines the cams should be replaced; attempting to make extreme adjustments will prove futile. Many fixers try to overcome clutch timing troubles by moving the rack wheel (6046) backward or forward. This practice is of course entirely wrong and brings on more work and more trouble. In all cases of clutch shifting trouble see that the clutch fork roll stud (6556) shown on Plate IV is in a neutral position so that it shifts the clutch an equal distance in both right and left positions; also be sure that the clutch shipper cams (6045-1, 6045-2, and 6045-3) are in good shape and tight on the drum. If these things are found to be satisfactory and the clutch still binds when shifting, then proceed to adjust the clutch shipper drum (6044) forward or backward as the case may be by means of the adjusting screw (15092) until it shifts properly.

Main Pawl Plate

Let us assume that a main pawl plate has worn slightly and not affected any part or movement of the machine except the clutch, which would be late in this case and would necessitate advancing the shipper drum. At a later date it becomes necessary to advance the main pawl to overcome some pattern drum trouble caused by the main pawl plate not making a full length stroke. This might cause the clutch to shift too early and it would be necessary to retard the shipper drum as much as the main pawl plate was advanced in order to get it back to its original position.

How to Correct Timing Trouble

Before closing this discussion I would like to touch briefly on a few things to keep in mind when machine timing troubles of any nature arise. Always consider the segment gear (6007) as a means of supplying a certain distance of travel or stroke to the main pawl plate (7001) shown on Plate V. Next consider the rack wheel (6046) Plate IX for utilizing this stroke to its fullest extent by means of teeth spaced certain distances apart to move the pattern drum as needed. Consider the drum driving gear (6040) only as a means of keeping the pattern drum in proper relation to the rack wheel (6046) not as a means of supplying more or less movement but simply earlier or later. And last but not least, all clutch timing should be done with the clutch shipper drum (6044) after the main pawl plate, rack wheel and pattern drum are properly set in relation to each other.

Machine timing as a whole is not difficult, however, there are many things to be taken into consideration and carefully analyzed before adjustments are made. Hit or miss timing adjustments on a Model K, H H or E S machine will prove disastrous, to say the least.

CONTRIBUTOR No. 6038.

Editor's Note—Plate X of the S. & W. catalog will be covered in an early number.

Answers Full-Fashioned Questions

EDITOR COTTON:

I note the inquiries of "CONTRIBUTOR No. 6091". He asks first what causes break-outs at the transfer corners in full-fashioned hosiery, and how this defect can be overcome.

Investigation over a long period has shown that most break-outs at transfer corners are due to excessive strain on the stocking through incorrect sizes being used by the consumer. He next asks for a discussion of French heels of narrower and shorter construction. This falls under the same category as the break-out at the transfer corners, but can possibly be explained further by the fact that if hosiery is made too tight over the instep, the frictional wear is greatly intensified.

Thirdly, this man pointed out that he has difficulty in securing full-fashioned needles which are consistently of the same specifications, and asks for the best way of testing various lots of needles and what characteristics of a needle are considered the most important.

Full-fashioned needles vary at all times, to some extent, especially in the temper of the wire. A sure remedy against variation is close inspection of needles when received from the manufacturer and rejection of all those that do not come up to the blue print standard and required temper.

CONTRIBUTOR No. 6104.

Methods of Operating Full-Fashioned Plants on Short Time

EDITOR COTTON:

The subject of operating full-fashioned mills on short time, brought up by "CONTRIBUTOR No. 6090" in the July issue of "KNITTING KINKS", will have to be discussed from just as many angles as there are different methods and conditions of manufacturing.

If a mill is equipped with heat and humidity control and is operating on direct knitting silk, the problems of starting up and shutting down are negligible, but if such a mill is operating wet or back wound silk some additional care will have to be taken of the silk where a close-down of more than 36 to 48 hours will be involved, especially in the summer time. If the mill has no humidity or heat control and is using backwound or wet silk their problem is entirely different and much more care will have to be exercised than when temperature and humidity is controlled. If such a mill is operating on direct knitting silk, no great deal of care is necessary so far as short shut-downs are concerned, especially where silk is housed on the machines in proper humidors.

Your inquirer makes the statement that the machines will be affected by the change in temperature between day and night, even though the room temperature is maintained. I cannot fully agree with him on this point. Normally, we find it best to operate full-fashioned machines at a temperature of around 75 degrees F. both in summer and winter, as a matter of taking care of the spread between winter

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and summer temperature. Where temperature is controlled around 75 degrees there will be no friction heat on a full-fashioned machine where bearings and friction points are all properly adjusted that will exceed this temperature, so the machine will remain in practically uniform temperature regardless of whether it is running or standing, where temperature and humidity are properly controlled.

In the matter of operating schedules, we have found it best where say only half time schedule can be made on a day and night operation, to run the leggers three days the first part of the week with the day help and three nights the latter part of the week with night help. One might logically inquire why we did not close down the night run and run the machines six days per week. Our answer would be: Do not break up or disturb a satisfactory running night organization.

In the matter of difference in pay between night and day labor, it is common practice to pay night labor a little more for their work. We are in sympathy with this idea. It has to be admitted that a day job is more desirable, and when a night operator is found who is willing to run at night and do satisfactory work, we think he is entitled to some consideration. And we believe that a uniform system of regular day employees and regular night employees will be far more satisfactory than a reciprocal arrangement whereby night men may shift to day and vice versa, or where they come in at different hours on different weeks and finally do an equal amount of day and night work.

In the matter of silk and conditioning room problems, this also reverts to local conditions at the mill. "CONTRIBUTOR NO. 6090" states there is a limit to how long silk can remain in the conditioning room without developing mildew. He is eminently correct in this statement and might have added that there is a limit to the time a cone of silk may sit in a humidor on the back of a machine without mildewing or getting too dry to do satisfactory knitting. Our suggestion would be to condition or back wind the silk, whichever the practice may be, in such small quantities that it will be consumed every day even though it is not planned to close down the plant. We think the best policy is to make cones small enough for both footers and leggers that they will be consumed in a little less than one day's operation.

CONTRIBUTOR NO. 6125.

EDITOR COTTON:

I notice the suggestion of "CONTRIBUTOR NO. 6090" that a discussion of the best way in which to operate a full-fashioned plant on short time be brought up in your "KNITTING KINKS" department. The only comment that I desire to make on the subject is that this gentleman does not seem to realize that the majority of full-fashioned plants have operated on daytime schedules, and only at the height of business peaks were compelled to operate day and night in some parts of the plant. The problem of running short time, therefore, and the question of regulating work is a comparatively easy one. With the decline

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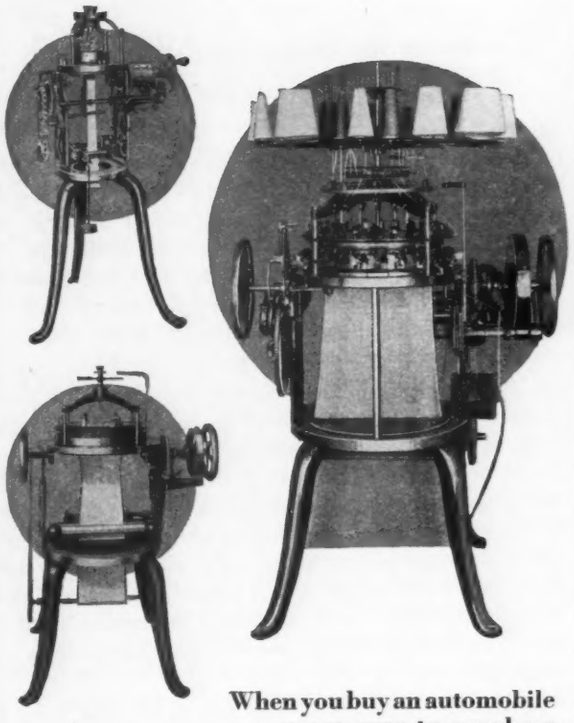

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in the demand for hosiery and in the desire of the manufacturers to maintain a low stock, each employee should be reduced in working hours per week, without laying off any hands, thereby keeping the organization intact and avoiding unemployment with the resultant burden on welfare agencies and lowering of morale.

Regarding the question of storing silk on knitting machines, idle over night or on week-ends, no difficulties should be encountered if such silk is properly conditioned. However, running conditions in the individual plants vary to such a degree that questions of this nature will arise in the minds of operators who lack personal experience.

CONTRIBUTOR No. 6102.

Formulas for Stripping All-Silk Full-Fashioned Hosiery for Re-Dyeing.

EDITOR COTTON:

Answering the question of "CONTRIBUTOR No. 6156" concerning the difficulty that he is experiencing with re-dyes on all-silk, full-fashioned hosiery, and noting his desire for a formula for stripping, the writer believes that the following is a good one for re-processing all-silk, full-fashioned hosiery, and one that should leave the goods in a satisfactory condition:

A boiling bath, containing from two to three per cent hydrosulphite, based on the weight of the goods, is first made up. The goods to be stripped are then entered as rapidly as possible and kept boiling from 8 to 10 minutes. They are then examined to see that the proper penetration and stripping have taken place. If the goods are not thoroughly stripped the stripping process should be continued for a few minutes longer; however, if the colors in the goods have broken down to a good white the bath should be dropped and the goods rinsed at 160 degrees F. and again in a cold bath.

The next in order is the dye bath, and here the dyer must realize that he is dealing with stripped goods and that it is up to him to bring the batch of goods up to his standard shade as soon as possible, for continuous boiling of silk will leave it in a harsh and, obviously, a well-cooked state.

Assuming that the dyer has brought the color up to shade in a reasonable length of time, the machine is overflowed and the bath is dropped. This is followed by a cold rinse, and in this bath there is added from two to three per cent—also based on the weight of goods—of a good emulsifying mineral oil and the machine is kept running for three or four minutes. This bath is then dropped and the goods are taken out and extracted.

This formula is being used in a practical way, and the writer trusts that it will overcome the difficulty which "CONTRIBUTOR No. 6156" is now experiencing.

CONTRIBUTOR No. 6162.

EDITOR COTTON:

A request for a formula for stripping the color out of all-silk full-fashioned hosiery, to be re-dyed, was made in a recent issue by "CONTRIBUTOR No. 6156."

We have found that full-fashioned, as well as seamless hosiery, can be stripped after dyeing, without the goods becoming harsh or glazed, which is the trouble your contributor is bothered with. This is true, if the goods have not been harmed in the first de-gumming and dyeing process.

To strip such goods, I will give two methods. The first, is, in a bath use ½ to 4 per cent of an anhydrous sodium hydrosulphite (the percentage to use depends upon the depth of shade which has to be stripped); and 1 to 2 per cent of aqua ammonia (the percentage of this to use depends somewhat upon the condition of the goods, which varies with the finish which has been put on them. Goods which have been scrooped with acid require more ammonia than goods finished in a neutral or slightly alkaline bath.)

The purpose of the ammonia is to keep the stripping bath alkaline, which will prevent blackening the Monel metal of the dyeing machine. Enter the goods, run at 180 degrees F. for a few minutes, add the ammonia, run a few minutes more, add the hydrosulphite, and bring the bath to a boil and hold it there for 15 to 30 minutes. The goods should strip clean in this time provided only such colors have been used that will be reduced by action of the hydrosulphite. It is also desirable to add to the stripping bath a small quantity of a good sulphonated oil as this will help reduce the friction on the goods while they are being run.

Another method of stripping is to use one of the titanium salt type of strippers or the so-called liquid strippers. This type has some advantages over hydrosulphite and some disadvantages. An outstanding feature of this type of stripper is its ability to strip the goods at reduced temperature.

To strip with this method: Enter the goods with warm water and add 1 to 2 per cent of ammonia. Run for a few minutes and add the liquid stripper in the ratio of about one gallon of stripper to each 100 gallons of bath. The temperature is now raised and after ten to fifteen minutes at not over 160 degrees F., the goods will have stripped out clean. The goods are then washed well to remove all traces of the liquid in the goods and nets, and then dyed in the regular manner.

In using this type of stripper, great care must be taken to have all traces of soaps and finishing compounds removed from the goods before processing and none must be used in the stripping bath. If such materials are present or have not been removed, a scum will form on the bath and goods, and sometimes the stripper will break down and leave a deposit which is very difficult to remove.

If either of these methods is used carefully, there is little reason for having harsh goods or chafed goods. The strength should not be impaired except so far that any treatment which the goods is given and which is severe enough to remove dyestuffs, must not add any desirable qualities to such goods, but with a little care, no harm should result from one trip through the stripping process.

CONTRIBUTOR No. 6165.

THE KNIT GOODS MARKETS . .

"IT can't be done," was common comment among manufacturers of women's silk full-fashioned hosiery following the reduction to $4 a dozen for 42-gauge goods, announced early last month by the Berkshire Knitting Mills. The "can't be done" comment meant that stockings of the description of the Berkshire number could not be made by any mill to be sold to jobbers at the new price. All the while it was being done, and several days before the Berkshire company reduced its price to $4, what was described as a similar stocking was being quoted $3.75 a dozen to large department stores by another manufacturer. A competitor of the latter went 2½ cents better in bidding for an order from one of the better known buyers for the trade in Philadelphia.

The hosiery trade was confronted by its major problem at the very outstart of the new year—how can prices be put on a profitable level and such a level be maintained? The month began with a great number of northern mills idle and some in production that, for the betterment of the trade, might appropriately have been idle. The situation was a spotty one, for some mills in the same area where approximately 50 per cent of the equipment was being given a holiday, a few plants were running on two shift tours, the managements explaining they were so crowded with orders that they could give their employes no more than two days for the holiday observance.

Some interests in accounting for the disparity in conditions among mills sought to make it appear that there was at the time not enough business to be had to go around, and that the busy mills took on more than their share by making lower prices than it was possible for those not so favorably situated to accept. This cannot be said to have been correct, for among the reasonably active establishments might be mentioned several that are universally credited with never cutting prices and with invariably operating only when it can be done profitably, and yet have been operating around 4½ to five days a week steadily since last fall. At least one of these is known to have a large jobber trade. Another sells to jobbers but has not been suspected recently of declining tempting orders from large retailers. This latter mill reported in January operating by day and part of the night and producing only against orders. It is a 42-gauge establishment and is known to have a strong selling hook-up in New York. A South Carolina manufacturer, in early January comment, was quoted, "We do not have a single order." A Georgia manufacturer operating also in Tennessee, reported "so well supplied with orders that we are going ahead with plans for installation of additional full-fashioned machines."

A Philadelphia mill shipping directly to the retail trade, under the mill brand, resumed operating January 16 after three solid weeks of idleness. About the same time a Philadelphia branch of a large manufacturer selling to retailers under advertised brands was covering its knitting machines with tarpaulins preliminary to what was intimated to operatives would be a shutdown for an indefinite period. A group of three Philadelphia mills—two of them in the direct-to-retailer classification—had not gotten started by the middle of January, except to run a few machines now and then.

With the big plant of the Berkshire Knitting Mills out of production for several weeks embracing the holiday period, and the full-fashioned industry in Reading and round about doing no better than an estimated 50 per cent of capacity output, Eastern Pennsylvania, and the New York, New Jersey and New England plants were contributing their share of curtailment of production.

There was grievous disappointment over a lack of interest in hosiery for January promotion sales. There was inquiry aplenty, but prices offered denoted no real interest in hosiery at value. There was offered in January, to several establishments, an order for 50,000 dozens of 42-gauge chiffons. So far as can be ascertained, there have been no takers. It is understood the offer was from a representative of a chain or low price shoe stores. A Philadelphia suburban mill early last month booked an order for 12,000 dozens, price not disclosed in the trade. "It was a very low price" it is stated by a person receiving his information from the mill management.

Developments as to last month's prevailing prices for hosiery of the types usually selected for promotional sales indicate the $4 price of the Berkshire for 42-gauge goods does not represent bottom and did not at the time it was announced to the trade.

The term "42-gauge" is too indefinite to be used in quoting for publication, and unless accompanied by descriptions, may be dangerous. For example, an eastern mill is receiving repeat orders for two-thread stockings of 42-gauge. They are said to give what is termed good service. The stocking fills a popular price niche for two-thread goods. It was brought out somewhat recently following mild agitation of a proposal for launching a movement in behalf of 51-gauge in two thread, designed to be quite popular during the remainder of the current season and for spring. It is expected production of this gauge will be increased, as a means for drawing a sharper line of demarcation for more definitely maintaining in the minds of buyers, distinctly separate groups of the refined and the coarse—the hosiery that is made with due regard for precision and the hit-or-miss which, because of price, could hardly be otherwise.

In the confusion over prices for spring, little seems to be heard of 48-gauge goods, for which, in the opinion of factors apparently not interested in possession of equipment of that type, there is barely

standing room as between 45- and 51-gauge. The 45- just now offers possibilities in a group which retailers like to stress as a popular price stocking not to be thought of in connection with retailer offerings as a 50-cent number, although that is the price in some shops featuring what they describe as mark-downs. Mill quotations for January were, mainly in a range $4 to $4.50 a dozen, some mill lines being held for $4.75.

A buyer for a New York wholesale distributor of hosiery was on a persistent search for 39-gauge hosiery quite recently. He found it difficult to locate ready-to-deliver stocks, and few manufacturers in position to make worthwhile deliveries in January. While there is a considerable production, demand recently has been absorbing available supplies, according to manufacturers, and but for the low prices for which 42-gauge may be had, quotations on 39- undoubtedly would be higher.

This gauge has been figuring conspicuously in department store 39-cent sales, and in some small shops at three pairs for one dollar. This construction also has been in good call from stores using silk stockings for premiums in promotion of sales of other lines. Thus, demand has steadily increased since an element among retailers has been in competition for the name of selling full-fashioned stockings at the lowest price, and productive capacity has decreased with the dismantling of hundreds of 39-gauge machines and destroying the parts. There is, besides a greater number of worn-out and obsolete 39-gauge machines than of any other type, according to machine builders having a knowledge of the latest model machines of that type to be installed.

Recent going quotations on 39-gauge hosiery were $3.50 to $3.65. Buyers were offering even less, following the downward change in prices for 42-gauge, and were active in canvassing mills in Reading, where, however, manufacturers were, as a body, disposed to run part time on orders rather than go into night production for getting volume on terms dictated by buyers.

Reading manufacturers charged Philadelphia and New Jersey manufacturers with being less resistant to the chiseling by buyers scouring the trade for special sale goods. It was felt by numbers of manufacturers that January would be the crucial period for their industry; that if violent recessions could be averted for a month to six weeks, there would be a chance for resumption of activity lasting until spring requirements of distributors and retailers had been taken care of. There are elements who profess to believe that, with the present potential production maintained, only a sharp rise in raw silk can restore hosiery prices to levels prevailing prior to the announced reductions in the past half year.

While raw silk declined in the New York markets by a little more than 30 per cent in four months, September to January, the prices at no time during the slipping justified the competitive quotations on hosiery of even the cheapest construction and use of lower grades of silk. This was often pointed out by manufacturers having an advantage in their raw material purchases at opportune times.

Some of the more successfully engaged full-fashioned hosiery mills are apparently making a market for their output by venturing into fields where competition may not be so keen as in most of them. For illustration, a few manufacturers are understood to be faring right well with grenadine, a type of stocking which, it will be recalled, a few years ago made a sudden leap into popularity and almost as suddenly dropped, comparatively, into obscurity. But dull luster remains as a legacy of a southern manufacturer's creative ingenuity. And it may be said there continues a limited demand for crepe silk stockings, from the Harron Hosiery Mill.

Movement to Push Medium Weight.

There is noted an unorganized movement for pushing medium service weight hosiery to the front for the current season. Even retailers, in instances, some few years ago were recommending customers, with a weakness for chiffons, to buy the heavier stocking, and the Brown Durell Co. is cited as warning intending purchasers of a recently introduced two-thread silk number that "of course this transparent fabric will not give the service a heavier fabric gives." Which will receive about the same consideration from women who want the sheer that is given to "thin ice" and "dangerous curve" injunctions. The world likes a thrill and women get it in the danger of a rip in very gauzy stockings. Nevertheless, if style decrees medium service weight hosiery, it will be quite the vogue—for a time. It is viewed as perhaps significant that the Allen-A company recently announced an increase of 25 cents a dozen in the price of its 6-thread number, to $7.50 a dozen.

Lower prices for silk full-fashioned stockings appears to make it more difficult to market "seconds" profitably. Retailers who designate "seconds" by proper markings usually find their customers giving preference to alleged first quality, and manufacturers using such tell-tale designations on reasonably fine gauge goods would find a very large element among retailers turning them aside for coarser gauge, at current prices of some mills. The Berkshire Knitting Mills, as all the trade knows, lost out with its experimenting with the sincerety of dealers in their relations with customers and, having some time ago abandoned the practice of marking "seconds", is disposing of irregulars through a Philadelphia jobbing house as its exclusive outlet for this class of goods, excepting its non-run numbers. The Burd Knitting Mills Co., commissioned by the Berkshire to handle irregulars of the company's regular lines, is doing precisely what was suggested several years ago as a solution of the irregulars problem. It was B. W. Heyman who evolved the idea of having all mills dispose of their irregulars through one properly constituted agency so hedged in by restrictions that its customers could not by any evasion of law or understanding deceive their customers as to the character of the goods in their relation to what may be marketed as perfect hosiery.

The commissioning of the Burd company by the Berkshire mills as its agency for all of its irregulars was commented on in the Philadelphia trade

as doubtless a good move for both parties to the contract, and it was a suggestion of several manufacturers that a similar course could be satisfactorily pursued by sectional groups of mills—Philadelphia, for example, representing one group, the southern field another, and Reading and immediate vicinity still another, and so on until every full-fashioned center was organized for a like purpose.

Styling the non-run type of full-fashioned stockings, it was expected by some watchful buyers for large retailers, will place that somewhat recent innovation in a position among the regular knit where it will receive the attention that was looked for it from the day of its inception. Leading manufacturers, to the number of less than a half dozen, have expended large sums in the perfecting of the non-run stocking, and are not likely to give it up as hopeless in view of the comparatively weak reception accorded it after first showings. That, however, was conceded to be a result of a short-sighted marketing plan, rather than only half-hearted approval of the stocking. Had mesh hosiery not been relegated at the time to the catacombs of past styles, the non-runs doubtless would have had a whirlwind start, notwithstanding the price was $1.35.

Non-Run Developments.

The diameter of the mesh in the non-run has been materially reduced and production by at least three leading manufacturers has been maintained in recent months at a satisfactory stage, it is stated by the mill managements. Furthermore, plain knit chiffon tops are being used for improving one feature of the non-runs, and this gives rise to the proposal that other changes will be affected by which the innovation will present no semblance to the original conforming to the Schwartz patented construction, beyond its all-important talking point—the fact that it is immune from runners. Styling of the non-run stocking is viewed as a portent of a second "coming-out" for the Easter parade.

The fact that the absolutely non-run stocking is of very fine mesh fabric has interested a few traders in the mesh stocking of last spring, with some modifications, and there is seen a possibility that meshes may enjoy another period of popularity. The cut-and-sewn type, in the higher price bracket, from a well-known mill in Philadelphia which aims to protect all of its creations with letters patent, is an improvement on the "cut out" of last year. It is too soon to approximate its chances for winning woman's favor.

Some of last year's mesh stockings from manufacturers of exclusively seamless-knit for women prove quite profitable for certain mills in which it was doubted by the managements a few weeks ago that the 1932 successes could be repeated this year. Fifty-cent mesh hosiery offerings in January by a few of the larger metropolitan retailers suggested to some traders a possibility of such a revival this year as might prove very interesting to owners of circular-knitting plants in northern centers, since there seems little left for them in women's silk.

Once the hub of the silk seamless hosiery industry, Philadelphia is believed to have but one such active plant remaining, that of the James A. O'Connel Co., which that veteran manufacturer James A. O'Connel organized and of which he is the president and general manager. He was several times on the verge of engaging in the manufacture of full-fashioned, and once had partly developed plans for occupying a southern site. As the last survivor of the silk seamless hosiery manufacturers in Philadelphia, he seems likely, judging from somewhat recent utterances, to remain in enjoyment of that distinction until forced by circumstances to retire.

There appeared in the January activities of some of the more important manufacturers evidence of confidence in a virtual rejuvenation of the silk hosiery trade. In fact, it was regarded a most hopeful sign that so many mills were giving no attention to special sale hosiery, concentrating effort on the promotion of wider consumer interest in types sold in the regular way and tending to discourage the practice of spasmodic bally-hoo in the movement of substandard items from hard-pushed producers. It has been a custom, notably in Philadelphia, to stress preeaster sales—often of undesirable goods—to the detriment of seasonal trading along rational lines. This appeared last month to be receiving strong discouragement from numbers of good mills in making no bid for "sale" hosiery orders. Certain manufacturers, jealous of the prestige of their widely advertised brands, were especially not dumping basement-sale stockings in quantities sufficient to menace the markets for spring lines bought and sold in the customary way. The outlook for fairly brisk trading in February and March was regarded the more promising by reason of the later Easter date and indications that dealers will offer fresh goods, of 1933 production, many having apparently effected a clearance of 1932 output.

Stepping up in children's hosiery appears to be quite general. A number of the better known manufacturers have gone beyond the matter of simply attractive coloring for their designs, taking a cue from the individualistic and effecting a harmony of hosiery with apparel. The Schuylkill Hosiery Mills, Reading, reported concentrating with good effect on childrens five eighth and half sock lengths, is halting, for the present, in production of anklets, these possibly being left to mills specializing more particularly in small children's and infants socks, for spring.

Patterned lisle numbers were noted among the early January offerings, and it appeared that some leading manufacturers were working toward somewhat higher price numbers for infants'. Fineness of fabric, notably lisle, represents one of the forward steps in children's hosiery, indicating that styling in this division of hosiery is receiving comparable attention with that given to women's and misses. In a number of respects, it seems, the hosiery industry has entered a new era of development along practically its entire trading front, as visualized in hand embroidered tops for socks for babies and clocks tapering downward from the hem to below the knee for women with a sports complex.

Price cutting by southern manufacturers of in-

fants' socks was charged as somewhat disturbing to business with jobbers, some weeks back. But it is stated among distributors that not only has this species of competition been abandoned by the several mills alleged to be parties to it; the price of a wrap type which had been cut from $1.00 a dozen, the quotation of one mill, to 85 cents by another, was advanced to $1.15. Late reports from the infants' sock trade is to the effect there is sharp competition in anklets, which now are expected to be free sellers in retail stores.

Price competition in men's half-hose seems not so easily disposed of as in the case of infants' lines, and prices of several rivals manufacturing in fetching patterns of what were designed to be 25-cent retail sellers, are said in the distributing trade to have been going to jobbers, in instances, at figures showing a variance of 35 cents a dozen.

While some of the jobbers in hosiery have been expanding their business in broadening the range of their offerings, although not covering more territory, there are instances of women's and children's numbers being taken out of their lines. Schofield & Co., Philadelphia, dropped infants' socks after chain stores had for some time been selling them for 10 cents a pair, and subsequently gave up all types of women's hosiery. This is one of the Philadelphia jobbing establishments which last year finished with all merchandise bills paid and owing banks nothing, it is heard in the trade. The Sullivan Smythfield Co. carries a more extended line of children's stockings but has narrowed its showings of women's to lines for only the lower price brackets.

"We prefer to sell to jobbers," say some of the operators of moderate size plants. They give us orders when we most need them and we find it easier to plan a production campaign. Of course, those selling an urban trade clamor for lower prices, as so many of the retail stores are trying to popularize prices of 50 cents and lower, and of course jobbers' profits are not as large as they used to be. Our second choice is chain store organizations."

Some of the chain stores will buy in a single transaction the output of a good size mill for some months, it is pointed out by a manufacturer having experience with such organizations. "Chains often are an ideal outlet for accumulations, if you can suit them with price," said this mill man. But, he continued, "if you place dependence on a chain organization and for any reason it 'lets you down', you're going to be out of luck, for the act of the chain means that some one is underselling you, and you will be likely to lose your nerve and accept the first offer that comes along, and lose as much as the profit you expected to get out of the chain. The chain store buyer is a dependable outlet for accumulations which you may pile up in your transactions with jobbers if you made a poor selection in picking your trade. It is safe always to include in your cost computation an allowance for gambling with the hosiery market."

While trading in summer weight underwear was in somewhat restricted volume in January, some of the important manufacturers of women's cotton numbers in the various garments still classed as underwear by some and lingerie by others, state the interest thus far manifest indicates more business will be done this year in the cotton construction than in 1932, when there was no recession from 1931 and, some factors maintain, there was a gain.

More Light Weight Cotton Underwear this Year than Last, is View; Mill Quits Rayons

One of the better known Pennsylvania manufacturers of both cotton and rayon underthings for women has discontinued the rayon line for the present. The concern last month used up its last yard of rayon cloth for bloomers and panties and disposed of the lot as close-outs, naming prices that were less than one-half of the mill's regular quotations in December. Jobbers to whom the goods were offered demanded a shading of those figures, and it was some time before a customer was found who was willing to take over the lot at a shading of manufacturing cost. The explanation given by the manufacturer for discontinuing the rayon line was: "We could not compete with 29-cent rayons while maintaining standards we would be willing to sponsor."

Speaking of rayon, it was reliably reported a few weeks ago that the Viscose Company's main plant, near Philadelphia, was operating 160 hours a week and had been for some little time, and that other acetate plants were maintaining a similar schedule.

There is indicated among jobbers a tendency to find fancy stitch fabric for substituting for ribs in women's and children's lines. The favor with which the tuck stitch met last year suggested to buyers that manufacturers might be able to devise some other stitch as a radical departure from that so profitably employed by some mills in 1932.

Jobbers placed some little light weight business last month, encouraging manufacturers to believe there will be available a fair volume of orders, but mainly for spot delivery. Many of the orders thus far received by some of the mills are said to be of that character. Jobbers say they are expected by retailers to carry stocks from which deliveries can be made within 24 hours.

Some of the mills in the heavy weight division both woolens and cotton, were reported in January virtually without orders after completing shipments for account of the Red Cross. Obviously there is very little call for men's heavy weights for the current season. Some of the chain store organizations are looking around for heavies for fall, but such inquiries relate to mainly trading propositions, interest in goods for fall being by no means general, say manufacturers.

Knitted Outerwear Trading Becomes More Active Lastex Form Fitting Bathing Suits Move Well

Activity has succeeded stagnation in the knitted outerwear industry. Manufacturers got away to a late start in sweaters and bathing suits and even at that, did not get the quick response to their offerings which ought to have been accorded them, for the lines of many manufacturers in both divisions

present a number of new features in the way of stitch and design, and in pricing the garments there was an advantage in low cost worsted and cotton yarns—cotton being a factor in the men's and boys' sweaters for the low popular price brackets.

Mills licensed to use lastex in the manufacture of bathing suits booked a considerable volume of business in January, numbers of jobbers placing very substantial trial orders. There was a general acceptance of lastex form-fitting swim suits, but jobbers wanted to know how they would be received by retailers before making commitments for seasonal quantities. As the retailers must wait for a consumer verdict, it may be some weeks before mills get a reaction to their offerings of lastex.

The suits of this material are regarded especially snappy in design and brevity. Being form fitting and short enough to be interesting, as described by some critics, they are expected to be quite conspicuous on the beaches of shore bathing resorts. They appear intended for display, rather than for swimming, although a utilitarian garment for that sport.

Building for Profits in Knitting

(Continued from page 97.)

ambition to achieve by one method what some may accomplish in other ways.

A Pennsylvania manufacturer of a line of women's cotton underwear in good repute found at the opening of the current light weight season that his operating and selling cost was too high to enable him to derive a reasonable net income from his sales, which in view of increasing competition in cottons, were in increasingly less volume. He added men's, boys' and children's numbers, and with the same sales force as in the past, is offering the entire range of combed yarn underwear, with fairly satisfactory results, it is currently reported.

Used underwear machines adapted to the manufacture of fabric for sweaters and bathing suits has been going into mills for experimental purposes in styling, a science that is an important contributing factor in the promotion of the knitted outerwear trades. Demand for old machines which can be applied to experimental work seems unceasing, and has been especially strong in the past few months. Machine builders, by following up buyers of decrepit seamless equipment doubtless would encounter opportunity for scrapping a lot of machines of this kind and procure installation of new equipment, to the betterment of the businesses in which the antiquated is in service experimentally.

Knit goods manufacturers have, in instances, according to their own admissions, countenanced promotion sale methods that have cost them considerable in lessened profits, to enable department stores to make a showing to consumers in the way of actual bargains, for which the stores take all the credit while the manufacturer who supplies the goods does not share in the glory incident thereto. In building for profit, it has been suggested by manufacturers, they eliminate the allowance for advertising their brand, since it has become an impression in the trade that mark-down sales of brands in good repute have

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SPUN RAYON

Textile mill men who are taking the pains to investigate the practicability of the new Quitex Spun Rayon are finding profit and satisfaction in its fashionable dull lustre and unusual strength.

To those who see the possibilities of Quitex, and who appreciate the Quissett 20 year tradition of fine cotton spinning, are assured added impetus to fabric sales.

It will be worth your time to write for samples of Quitex Spun Rayon.

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Wm. H. Butler, Pres.
Edward H. Cook, Treas.
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QUISSETT MEANS QUALITY

a tendency to impair their value in merchandising at normal prices, besides requiring of the manufacturer an inadequate price for his product.

The executive of one of the better nationally known department stores is quoted as favoring but one special promotion sale, not more than two a year, more being calculated to divert attention of the consuming public from actual needs and thus deferring their purchases while business at the shops loiters. That business is like money in the strong box that could be employed in promotional enterprise. The store encourages keeping the postponed business in storage pending a "sale", which sale in turn encourages a large shopper element to declare a moratorium on purchasing until the next "sale" is pulled off. It was noted last month that many manufacturers were not bidding for orders for promotion sale goods, producing rather against orders only in the regular way at then regular prices.

Department stores are charged with more abuses in merchandising than would be countenanced in many of the small shops. One of these is to persuade a manufacturer to make a special price for a "basement sale", and then display the goods on first floor counters, at basement prices. The point is made in behalf of mills of the modern stamp producing, for instance, silk hosiery in the finer gauge, that they do not have to contribute, in the way of a specially low price, to this form of merchandising; and therefore their product is the more respected, in not having been made commonplace.

"Hosiery is so cheap that it is being used as a premium in the promotion of sales of other goods," it was remarked by a manufacturer who believes that such use is "bad for the hosiery industry." His line is not so cheap that it would be bought for premium purposes, and, in any event, would not knowingly be sold for that purpose, because of damage to the industry in proportion as the practice is indulged by manufacturers.

To reclaim the trade with jobbers that has been lost in soliciting the business of retailers, a manufacturer proposes a bonus for jobbers carrying immediately deliverable goods. The jobber, he contends, is the logical source of supply for small retailers generally and large ones specifically who buy in drug store quantities, but it is a question with this manufacturer whether many mills are giving the jobber support. In any event, this friend of the middle-man in business believes, manufacturers, in striving for methods by which profits can be substituted for loss or "an even break," will be found this year making some radical departures from the beaten paths in marketing knit goods. "And the salesmen we shall employ this year, on the road and in our sales room," the manufacturer added with some emphasis, "will be men trained in their particular line, from raw material and the mechanics of knitting, up to insidious diplomacy. We want men who can combat adverse criticism, if they hear it, and who can grasp the importance of suggestions from buyers. It is easier to make meritorious goods than to sell them at their value. This is one thing that we aim to balance in trying to make our business more profitable than last year."

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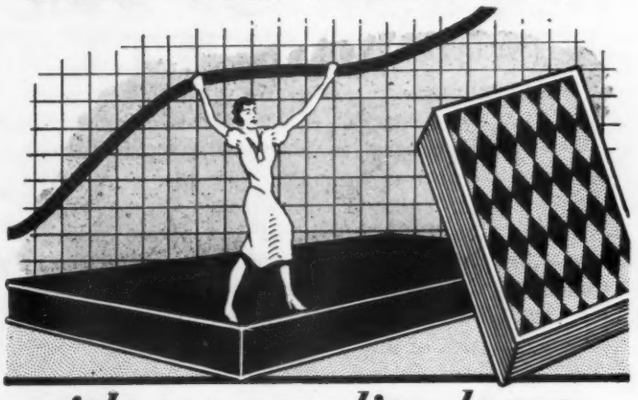

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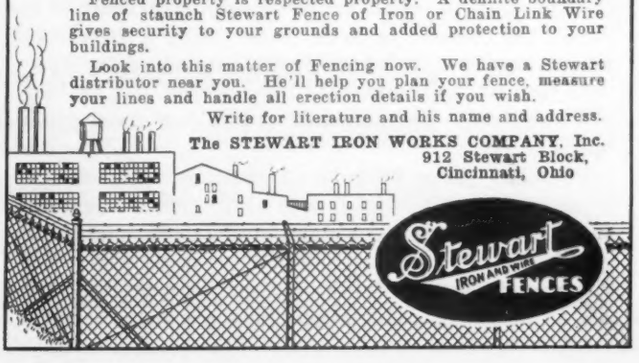

REVIEW OF THE YARN MARKET

Philadelphia, Pa., January 16, 1933.

COTTON yarns moved into a somewhat stronger position after post-holiday dull trading, during which prices of carded weaving numbers gave evidence in spots of slipping. For two weeks after the start of 1933, carded single cones were quoted in a range 12 to 12½ cents. The bulk of the business, it seemed, was at the soft side of the range, and some was understood to have been accepted at a shading from 12 cents, so that it seems not improbable that occasional sales of low grade yarn were made around 11½. In the meantime, some business offered to certain southern spinners at 12½ was rejected, offers to pay this price being accepted later, but declined in the third week in January.

The Philadelphia trade was not satisfied with the best prices possible of attainment, however. Plushes and tapestries were doing little in the Philadelphia area, and yarns were not in request for anticipation. With trading in this division at a low stage, there was especially keen rivalry for the orders in knitting yarns that seemed to be coming from unexpected sources at times, keeping dealers on their toes. Underwear mills in the Pennsylvania and New York state centers were no less interested, in market developments, as it was the prevailing opinion a stronger situation in cotton underwear in 1933 than that of last year is a foregone conclusion.

About the time prices for carded knitting yarns were beginning to look up as a mid-January development, a buyer of around 200,000 pounds of carded and combed was turning down quotations of 12½ for 12s, some houses bidding 13. That he had contracted at 12 cents was not doubted, although this was the low side of the range on 10s. The Philadelphia trade felt that price trimming was confined to a comparatively few sellers of carded knitting numbers.

Weaving yarns had been lagging for so long that, had manufacturers made offers on the very low side they might have covered advantageously for their needs for some time. It seemed apparent to yarn traders that manufacturers believed there was little chance of the allotment bill in the then form, imposing a heavy tax on cotton, becoming a law. In any event, it was a common opinion that legislation pending and agitation for drastic enactments were being felt adversely in the cotton industries specifically and in textile manufactures generally. This might seem to be open to question, as there is evident a keen interest in yarns, the obstacle to more trades being a difference of opinions as to values. There is a defined "willingness to buy", as commented by concerns, but an "unwillingness to pay adequate prices for good grade yarns".

Combed yarns have been especially unsteady for some weeks. A few leading establishments representing important southern spinning interests state that in their judgment a considerable poundage has been contracted for at painfully low prices since the middle of December. Quotations have shown a disparity of several cents since the collapse of the price structure late last year. It was expected as January wore on and traders were trying to combat demoralization, that the market for combed would present a better front well before the dawn of spring. Quotations on the basis of 26 cents for 36s singles were said by interests standing pat on that level, were not bringing them any business. Just what manufacturers were paying was left to conjecture. There is seen a possibility also of getting back to some sort of a basis for value for mercerized yarns.

Deliveries are going forward steadily against contracts placed some weeks ago just after the break. Prices are understood to have been very close to a basis of 50 cents for 60s/2 ply, mostly somewhere between that figure and 55. Efforts have been maintained to keep the price of strictly good grade 60s at 50 minimum. Recent deliveries have been going in rather good weight to men's half hose mills.

Philadelphia prices published January 14 follow:

Single Skeins.

4s to 8s	11½ @12	10s	12
12s	12½	14s	13
16s	13½	20s	14½
24s	15½	26s	16½
30s	17½		

Single Warps.

10s	13½	12s	13
14s	13½	16s	14
20s	14½	26s	16½ @17
30s	17½ @18		

Two-Ply Skeins.

8s	12	10s	12½
12s	13	14s	13½
16s	14	20s	14½
24s	16	26s	16½ @17
30s	17½ @18	40s	23 @24

Two-Ply Warps.

10s	12½	12s	13
14s	13½	16s	14
20s	14½ @15	24s	16½ @17
26s	17 @17½	30s	18 @18½
40s	25		

Frame Spun Carded Cones.

8s	12	10s	12½
12s	13	14s	13½
16s	14	18s	14½
20s	14½ @15	22s	15
24s	16	26s	16½ @17
30s	17½ @18	40s	24
30s double carded			19
30s tying-in			17

Carpet Yarns.

8s and 9s white warp twist	12½
8s tinged tubes	11
8s part waste	10½

Two-Ply Combed Peeler Skeins and Warps.

8s to 16s	20 @21	20s	22
24s	23	30s	26
40s	31	50s	35
60s	39	70s	49
80s	59		

Single Combed Peeler Yarns on Cones.

10s	18	14s	19
16s	19½	18s	20
20s	20½	24s	21½
30s	24½	36s	27½
38s	28½	40s	29½
50s	34	60s	38
70s	48	80s	58

Mule Spun Carded Yarn on Cones.

10s	17	12s	17½
14s	18	16s	18½
18s	19	20s	19½
24s	20½	28s	21½
30s	22½	40s	29

Mule Spun Combed Peeler Yarn on Cones.

10s	23	12s	23¼
14s	24	16s	24½
18s	25	20s	25½
22s	26½	26s	27½
28s	28½	30s	29½
36s	32	38s	33½
40s	34½		

Tinged Insulating Yarns.

8s-1	10½	8s-2	11
10s-1	11½	10s-2	11½
12s-1	12	12s-2	12
		20s-2	14

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CONDITIONS COTTON FIBRES

MINEROL • Makes cotton fibres more supple and pliable; prevents friction and breakage through the mill thereby saving good cotton. This item alone will show profits above the cost of **MINEROL**

BRETON MINEROL PROCESS PATENTED

Improved equipment effects complete distribution of **MINEROL** • A cleaner card room assures a cleaner spinning room • A cleaner cotton mill assures better yarn • Better Yarns Find a Ready Market • The Mechanical Equipment Used With The **BRETON MINEROL PROCESS** is offered to the Mills on a most attractive basis

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High Grade Castor Oil Products
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PENTRALYN, a superior assistant for Beam, Spool, Bobbin and Package Dyeing.

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Solvay Caustic Soda is made from Soda Ash manufactured by the Solvay Process. The same high degree of technical supervision and the same scientific methods are exercised in producing Solvay Caustic Soda that are followed in making Solvay Soda Ash—the standard since 1881.

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J. T. Sudduth & Co., Birmingham, Ala.
Miller-Lenfestey Supply Co., Tampa, Miami, Jacksonville, Fla.
Burkart-Schier Chemical Co., Chattanooga, Tenn.
Paper Makers Chemical Corp., Atlanta, Ga.; Marrero, La.

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for highest quality bleached goods at lowest unit cost—

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Up-to-date mills all over the United States have discovered these two **modern** essentials to a superior and economical bleach. **Becco** Concentrated Hydrogen Peroxide **plus Becco** Technical Service means a careful, accurate application of peroxide to **your** bleaching requirements. The result, to which so many mills bear testimony: the highest quality bleached goods at lowest unit cost. **Becco** can be adapted to the bleaching of any fabric—raw stock, yarns, knit goods, hosiery, piece goods, specimens, etc. Write for full details.

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BUFFALO, NEW YORK
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"Solivol B" *(Reg. U. S. Pat. Off.)*—for softening Bleached and Dyed Rayon.

Hydroxy Three Fibre Boil Off Oil *(Reg. U. S. Pat. Off.)*—Degums Pure Silk and Boils out Coning and Winding Oils at the same time.

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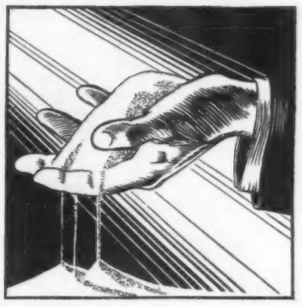
removes the size completely without weakening the fibre, and insures quick and thorough penetration during the kier boil. Goods desized with DEGOMMA 20F come out of the kier white and absorbent which makes possible level dyeing and printing.



Degomma 20F is a dry, white powder which is clean, stable, accurately standardized and convenient to handle.

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(2) Penetrates the Warp.
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(5) Keeps Help satisfied.
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Publisher's Statements and Audit Reports

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DEXTRINES
WHITE DARK CANARY
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These are selected products available for the purposes and conditions of exacting textile manufacturers.

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IMPREGNATED

NO WARPING
NO SPLITTING

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AT INSIDE OF BASE, THE PART SUBMITTED TO THE GREATEST WEAR AND TEAR.

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THE textile industry today, like all other industries, is breaking precedent with progress. Unless the old way is the best way it does not belong.

The Centrif-Air Adjustable Cotton Cleaning System broke precedent by offering a better method well worth adopting. It is a fine example of progress in the textile industry, proved in scores of installations.

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THE CENTRIF-AIR MACHINE CO., INC.,
ATLANTA, GA.

THE CENTRIF-AIR ADJUSTABLE COTTON CLEANING SYSTEM

Ask the Mills Now Using It

AN UP-TO-DATE PRINTING PLANT

equipped with modern machinery and a staff of competent workmen, solicits, thru this publication, a trial order on your printing needs.

We have built a reputation that is known over the entire South by our special attention to the minutest detail.

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ONLY ONE OF THE REASONS WHY THE PRODUCTION OF OVER 200,000 COTTON, SILK AND RAYON LOOMS IS BEING TRIMMED ON

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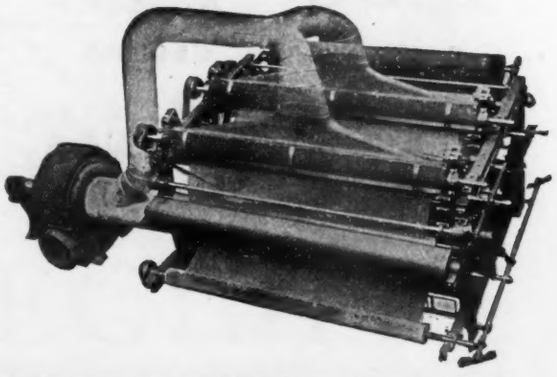

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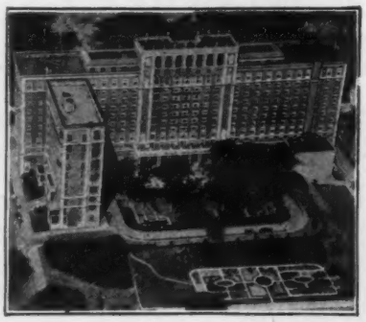
B. S. ROY & SON COMPANY
Established 1868
Worcester, Mass., U. S. A.



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Depend on the Biltmore to smooth ragged edges from a trip hastily planned . . . to provide resort-pleasure for guests desiring last-minute diversion.

At your finger tips you have the complete services of a cosmopolitan hotel . . . 600 large, airy outside rooms with circulating ice water and private bath . . . a cuisine service of outstanding merit . . . golfing privileges at Atlanta's best courses.

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(No court rooms)

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MAIN DINING ROOM: Club Breakfast 65c and 85c. Luncheon $1.00. Table D'Hote Dinner $1.50 and $2.00.

ATLANTA BILTMORE

"The South's Supreme Hotel"

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PHILADELPHIA

600 ROOMS AND BATHS

A Room and a Bath For Two and a Half

$2.50 *Single with Bath*

$4.00 *Double with Bath*

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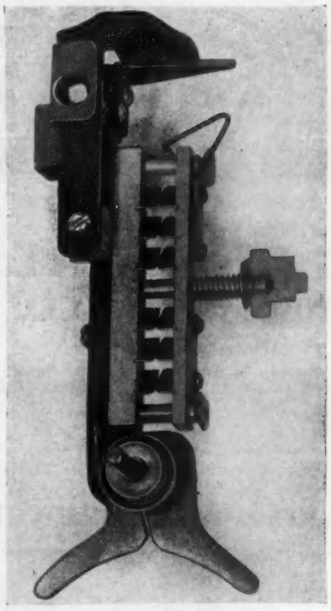
HOTEL PENNSYLVANIA

39th & CHESTNUT Sts., PHILADELPHIA



MR. SPINNER HAVE YOU CONSIDERED

The question of this year's cotton being exceedingly "trashy and dirty"? Accordingly are you turning out "trashy and dirty" yarns with excessive waste in your carding room? Does your product meet the exact requirements of your customers? Do you want to deliver a better product to your customers? If so, have your winders equipped with ECLIPSE YARN CLEANERS. They will guarantee you a *better* and *cleaner* yarn with no additional production cost.

The ECLIPSE YARN CLEANER is guaranteed to improve the quality of your yarn.

Request us to have a representative call and demonstrate to your entire satisfaction what the ECLIPSE YARN CLEANER can do for you. THE ECLIPSE YARN CLEANER is standard equipment in many up-to-date cotton mills.

The ECLIPSE YARN CLEANER can be attached to Foster and Universal winders and spoolers.

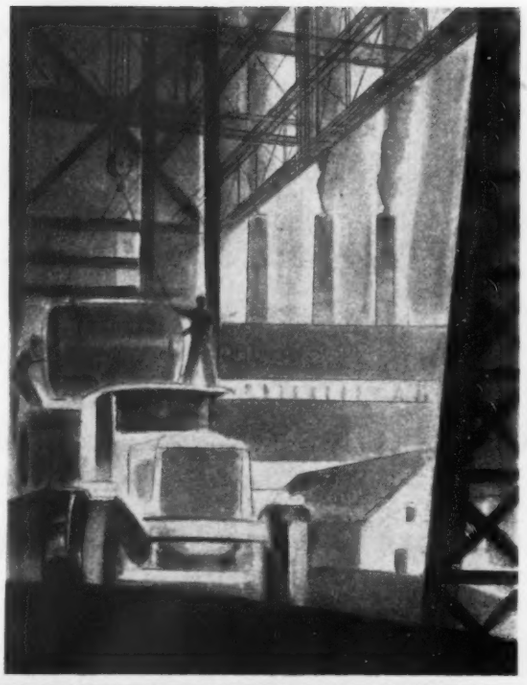
Telegraph or telephone us collect for a demonstration—

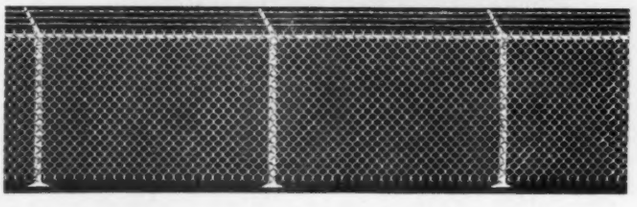
ECLIPSE TEXTILE DEVICES, INC.

Elmira, N. Y.

Southern Representative:
J. D. Lutes, P. O. Box 1651, Charlotte, N. C.

ECLIPSE
IMPROVED
Yarn Cleaner





A Watchman that Never Sleeps
—*Never Misses a "Round"*

Every hour of the day and night Cyclone Fence is on guard. It never sleeps—never argues—never shows special favors. It is just there—that is all—and that is enough.

Behind this unclimbable barrier of steel—crowned with barbed wire—property and lives are safe. Men can work undisturbed. Operations can be regulated. Goods can be stored outside with safety. Admissions and exits can be rigidly controlled. Premises can be landscaped and kept in order.

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CYCLONE FENCE COMPANY
General Offices: Waukegan, Ill.
Branches in Principal Cities

SUBSIDIARY OF UNITED STATES STEEL CORPORATION

Pacific Coast Division: Standard Fence Company, Oakland, Calif.

Cyclone not a "type" of fence—but fence made exclusively by Cyclone Fence Company and identified by this trademark.

Cyclone Fence
REG. U.S. PAT. OFF.

"Smoother than Grease" Since 1890

20 years without a drink—

ARGUTO OILLESS BEARING CO.

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Direct Factory Representatives in the South
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Pays Twice Its Cost

A Loper contract contains the guarantee that its service will pay you at least twice the amount it costs you.

Let us give you references that prove we accomplish even more than we guarantee.

Fully 25% of All Cotton Textile Spindles in the U. S. are operated on the Loper System.

Ralph E. Loper Co.

INDUSTRIAL ENGINEERS

Specialists in Textile Cost Methods Over 20 Years.

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Mechanical - Electrical
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Plans, Specifications, Supervision of Construction, Machinery Lay-outs, Location Studies, Manufacturing Reports, Appraisals, for Industrial Plants

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BUILDING SUITABLE FOR KNITTING MILL located in HENDERSONVILLE, NORTH CAROLINA, Fire-proof construction, of brick, concrete and steel, two story and basement, size 80 x 150 feet. Good location on paved street near railroad. Built 1926 at cost of $88,000.00, exclusive of land. For quick sale $12,500.00 on terms. Complete details, pictures, etc., write

STATON INSURANCE & REALTY CO.

Hendersonville, N. C.

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McCord Service is preparing mills for tomorrow. Let this service assist in putting ***your*** mill on a paying basis. Besides appraisals, McCord Service includes

LIQUIDATIONS—of complete plants.
MILL PROPERTIES—purchased and sold.
TEXTILE MILL EQUIPMENT—Used machinery for cotton, worsted, silk, dyeing, bleaching and finishing.
KNITTING MILL EQUIPMENT.

The problems of each mill are solved from a thoroughly scientific viewpoint, conscientiously and efficiently.

Any of the offices below are at your command. Consult the one nearest you and find out more about what McCord Service can save for you.

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100 East 42nd St., Tel. Ash. 4-0345

PHILADELPHIA, PA.
1244 Commercial Trust Bldg. Tel. Regent 2185

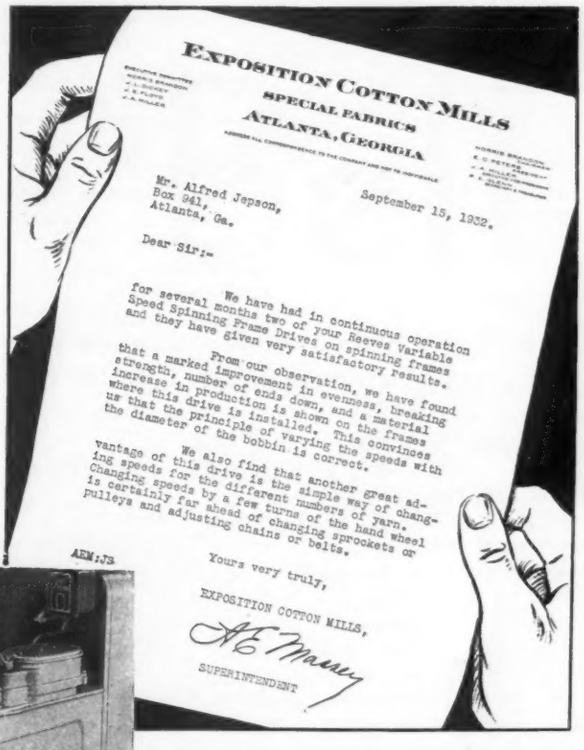
BOSTON, MASS.
161 Devonshire St. Tel. Liberty 5948

SOUTHERN REPRESENTATIVE: Wm. G. Pattison, Charlotte, N. C., Tel. Charlotte 2-0264

PROOF

Mill Superintendent Reports Improved Yarn Quality and Increased Production with *New Variable Speed Spinning Frame Drive*

★ The REEVES Spinning and Twister Frame Drive is already proving itself in more than forty mills. This drive is demonstrating that variable speed control in ring spinning is *not only practical but indispensable.* Spindle and front roll speeds are automatically increased in proper ratio, as bobbins fill, insuring uniform tension and twist on yarn at all times. *Increased production alone pays for drive in short time.* . . . Compact. Requires no more space than ordinary constant speed individual drive. Quickly applied to either new frames or old frames. Available for either warp or filling wind.


EXPOSITION COTTON MILLS
SPECIAL FABRICS
ATLANTA, GEORGIA

Mr. Alfred Jepson,
Box 941,
Atlanta, Ga.

September 15, 1932.

Dear Sir:-

We have had in continuous operation for several months two of your Reeves Variable Speed Spinning Frame Drives on spinning frames and they have given very satisfactory results.

From our observation, we have found that a marked improvement in evenness, breaking strength, number of ends down, and a material increase in production is shown on the frames where this drive is installed. This convinces us that the principle of varying the speeds with the diameter of the bobbin is correct.

We also find that another great advantage of this drive is the simple way of changing speeds for the different numbers of yarn. Changing speeds by a few turns of the hand wheel is certainly far ahead of changing sprockets or pulleys and adjusting chains or belts.

Yours very truly,

EXPOSITION COTTON MILLS,

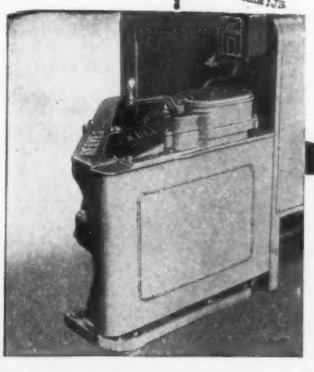
A. E. Massey

SUPERINTENDENT

AEM:JB

Send for Report of Tests in Many Mills

Specific accomplishments in ring spinning, with REEVES variable speed, are graphically shown by charts and tables in a report of tests in many mills. Send for this report. See how variable speed, in comparison with constant speed, in eight mills produced yarn with less variation, greater breaking strength and 15% average increased production. Many other important performance facts.



REEVES
SPINNING and TWISTER FRAME DRIVE

REEVES PULLEY CO., Columbus, Ind.

Please send copy of booklet T-300, containing data on mill tests.

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PAT. APPLIED FOR
TRADE MARK

Belt

Low tension and special compensated construction give Compensated Belt (Pat. Applied For) *3 to 4 times longer fastener life.* This fact has been conclusively proven during two years of unparalleled testing.

The Compensated Belt, with ten distinct advantages over standard rubber belt, marks a truly revolutionary achievement in the history of rubber belt manufacturing.

Our Condor Belt is the *original red friction surface belt*—our Compensated Belt is the *only low tension friction surface belt.*

Both sold by leading jobbers

Condor LINE

V-Belt	Fire Hose
Flat Belt	Steam Hose
Air Hose	Mill Sundries
Cone Belt	Suction Hose
Acid Hose	Oilless Bearings
Water Hose	Rubber Lined Tanks

Rubber Covered Rolls
Industrial Brake Blocks and Lining

The Manhattan Rubber Mfg. Division of Raybestos-Manhattan, Inc.
Executive Offices and Factories, Passaic, New Jersey

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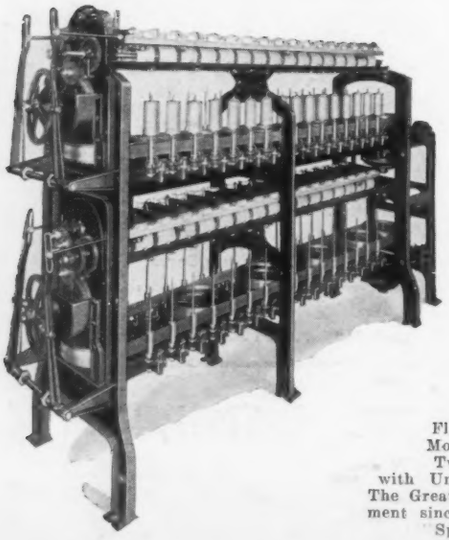

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